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GLEANINGS IN BEE CULTURE

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SCENINGS IN BEE CULTURE

A JOURNAL
DEVOTED
TO BEES
AND HONEY
AND HOME
INTERESTS.

ILLUSTRATED
SEMI-MONTHLY

Published by THE A. I. ROOT CO.
\$1.00 PER YEAR
MEDINA, OHIO.

Vol. XXXIII.

AUGUST 1, 1905.

No. 15



PUTTY-KNIFE for a hive-tool, page 773. Is it strong enough to raise a heavy super?

BROTHER DOOLITTLE, here's a hearty vote of thanks for that article, page 775. On the points there discussed I've always felt shaky, and before you and Mr. Muth-Rasmussen get through I hope to be more solid on my feet.

I'M AFRAID some beginner will be misled by that paragraph about drones, p. 759, into thinking that it will be "very harmful" to suppress them. It should have been accompanied by the comment, "Very pretty talk, only it isn't true." [I quite agree with you.—ED.]

YE EDITOR has now shoved up the extra cost of four-piece sections from 75 cts. to \$1.00 a thousand, with the extra labor of putting together, p. 756. Well, that's no more than four-piece sections cost years ago, and the extra labor of putting together no more now than then. Not going to raise chunk honey yet, Mr. Editor, so there.

I MUST CONFESS to just a little fear that so much caging of cells and virgins away from the touch of workers may not be conducive to the highest effectiveness of the resulting queens. [Possibly; but I do not believe there is any good proof yet that would sustain your fears. The fact is, some of these caged cells and queens subsequently make remarkable records.—ED.]

HERE'S AN EASY WAY to get honey out of cappings, especially for those who have a small quantity: Let the honey drip out of the cappings for three or four days in an ordinarily dry place. That's good table honey. Now take it down cellar and let it continue its dripping business. At first it

will be fairly good honey, but will get thinner and thinner till it becomes only sweetened water, and then your cappings will be pretty clean. You'll have something that will make good vinegar. But it won't work in Colorado and other places where the cellar is as dry as the attic.

A HIVE-TOOL with a pry, a scraper, a hammer, and a hook, all in one, page 756. Umh, well, may be it isn't too many things in one; but unless it can be added without increased weight, at least the hammer might be left out. [In our yard the hammer feature is very highly prized. No, I would not like to dispense with that; but it is true that we may try to get too many things in one tool and so spoil it.—ED.]

STILL BETTER than the wood screw mentioned as spacer, page 765, and taking much less time to drive in, is a nail with head $\frac{1}{4}$ inch thick. Thousands of such spacers are in use in Europe, but they can't be obtained in this country. [We tried to get such a nail in this country as you describe, but could not secure them without paying a high price. If we could be sure of a large demand, then automatic machinery could be built by the wire-nail people to turn out nails such as you describe, at a comparatively low price. I will investigate the matter a little further, and see what we can do.—ED.]

JUST FOR FUN I have counted the supers left on the hives in the home apiary July 20, after about 100 supers of finished sections have been taken off. Six colonies have one super each; 16 have two each; 41 have three each; 28 have four each, and 3 have five each. That's not so many as were on a week or two ago, a few colonies at that time having six supers each. [This is all very interesting; but you fail to tell one very important thing: How does this season compare with last year? or, better still, how does it compare with the average season with you? Bee-keepers seem to be reticent as to whether they have a honey crop or not; but I do not believe you are one of

those. If no honey is reported, or very little of it, it gives the impression generally that the season has been a failure. Later on, when honey is dumped on the market, prices are liable to go all to smash. The slight upward tendency in prices of generally reported failure is more than counterbalanced by overloading the market at the wrong season, say after the holidays. But I shall have more to say on this subject elsewhere.—ED.]

"IF WE HAVE a fair season, is it necessary that we should have another year in which to determine the value of a queen?" quoth ye editor, p. 756. I think you misapprehend, Mr. Editor. I didn't ask "another year," but merely one "full season after the year she is born." Come to think of it, though, if all queens were reared at the close of the harvest, that would allow time for a full record when a year old. As to deciding on that queen for a breeder because of her record of three days, it might be pretty safe if the record was sufficiently large; but another queen in the same apiary with a smaller record for that three days might make a better record for the season. Wouldn't you rather trust to the record of the whole season than to that of three days? [But the record of the queen that filled the whole super in three days was good the *entire* season. I question very much whether a colony that would make a smart spurt for a few days would not also make a good record as compared with other colonies in the yard. Our old red-clover breeder, which is dead now, would often make a fine showing in the combs when other queens were doing nothing; then when there was a real *flow* of clover or basswood she would jam the honey into the supers in a way that left every thing else behind —ED.]

BETTER be a little more explicit when you give instructions to beginners, Mr. Editor. Page 761 you say, speaking of dual introduction, "As soon as she is laying, the other virgin . . . is fixed so that the bees can eat out the little plug of candy." I know a man not a thousand miles from Marengo who freed the caged queen directly into the hive at the same time he took away the laying queen, without any ceremony of candy-eating. You see he hadn't read page 761, but went by page 704, "Just the minute she deposits eggs she is removed, and virgin No. 2 is released, when she will fly almost immediately." Some of his virgins thus unceremoniously released were accepted all right. Mostly, I think, they were maltreated or killed. [The editorial in question was written for the experienced bee-keeper, and not for the beginner, who, I believe, should not attempt the dual plan of introducing when there is a possibility of his making a failure with even the single plan. To be sure, you know how to fix a cage so the bees can eat the queen out. We have a little slide that shoves over the candy; and after the virgin has been confined a sufficient length of time so that she has the same body odor as the cluster of bees with her, and the

other queen laying and taken out, then we pull the slide over, exposing the candy so the bees can eat her out in a few hours. But almost any cage can be handled in this way. If a piece of tin is tacked over the candy, and then pried off at the proper time, precisely the same result will be accomplished. We introduce hundreds and hundreds of virgins by releasing them immediately. But we could not do that on the dual plan that I was talking about. As long as there was a laying queen or a virgin in the hive we could not let out another virgin without bringing on a small-sized war, and a fight to the finish.—ED.]

REASONING pretty good, Mr. Editor, page 757, but a little astray in your facts and suppositions. "A case of sections weighing 12½ pounds is made up of sections that won't crate up well." Error of fact. I've had many a one that crated perfectly; expect to have more of them. "Possibly you were referring to the 1½ section." Error of supposition. I was referring to 1½ sections. "You say you have produced many a case of full-weight sections with separators. But this is not saying it was an average." Pray, what has that to do with it? If only one case in a hundred is full weight, should I be obliged to be docked on that one case? Given price enough, and I'll agree in a good season to have the whole average full weight. But I'm not likely to make any strenuous effort in that direction so long as I'm to be punished for it to the tune of 1 to 3 cts. a pound. In my crop of 1903 I notice one case weighed 12 pounds 14 oz., and it cased perfectly. That was without any sorting out for heavy sections, but with some effort to keep down the weight of cases. No, I don't believe we can see alike. But then, it isn't necessary, for I don't know that my digestion would be all right if I didn't have something to quarrel with you about. Just this one question by way of a parting shot: All your argument for full weights bringing 1 to 3 cts. a pound less is based on their being leaky because without separators. Now if that were the real foundation, don't you think that, instead of saying they must weigh less than 16 oz. to the section, it would have been, "they must be separatored"? [If we are going to base our statements on unusual or extraordinary conditions, throwing out of consideration entirely general averages, we shall have a hard job to prove any thing. I feel sure you know that a 1½ section does not generally run up to a full pound weight: so what is the use of shoving the exception forward? If commission men were all bee-keepers they probably would put forward that latter statement. But even a case of sections produced with separators might have its combs so fat that they would be bulgy and leaky. It is natural, then, that the commission man should make the statement just as he did. There is not one commission man in a dozen who knows than an overweight or bulgy section is generally from an unseparatored super.—ED.]



BEE KEEPING AMONG THE ROCKIES BY J. A. GREEN

If you are interested in raising your own queens, as you ought to be, you should have a copy of "Baby Nuclei," by Swarthmore.

J. U. Harris, the President of the National Bee-keepers' Association, is a bee-keeper again, after being out of the ranks for several years.

Nearly all the surplus secured here this season has been from cleome. It is a very thick, heavy-bodied honey, of a deep golden color, and a flavor that most call very good.

Some of the granulated honey in paper sacks that has stood on the shelves of the grocers until the middle of July is still hard and firm, while some has become very soft. I think that that kept hardest was the first to granulate, and contained a larger proportion of alfalfa honey than that which softened in hot weather.

When your smoker becomes incrusted all over the inside with a thick carbonaceous deposit, pour a little kerosene over it and set it on fire, with the top of the smoker tilted back. This will soften the deposit so that it can be easily scraped off; or if you wait until it has burned out it will shrink into a scale that will readily come loose from the tin. Some good friend told me this and I pass it on.

MORE THAN ONE LARVA IN A CELL.

To find several eggs in a cell is a common occurrence; but to find more than one larva is rare, as the bees usually remove the surplus eggs before they hatch. I have seen this several times, and had a very interesting case this summer. In a small colony with an extra-good queen I found a frame of brood in which a large proportion of the cells contained two and three larvæ about a fourth grown. I wanted to watch them closely; but, unfortunately, the queen was accidentally killed, after which the extra larvæ disappeared very quickly.

CLIPPING QUEENS' LEGS.

Some time ago a correspondent of the *American Bee Journal* recommended cutting off a part of one of the large legs of a queen in order to get queen-cells raised, alleging that the bees would at once try to supersede her, and that, by removing these cells before they hatched, the bees could be compelled to raise other cells and thus a large

number of fine cells be secured. I never tried it that way; but I have a queen that lost nearly all of one of her large legs in April, 1904, by an accident in clipping. The first season she did as good work as any queen. She is now failing, but the bees show no signs of a desire to supersede her.

UNRIPE HONEY.

It is interesting and encouraging to note the attitude that is being taken in regard to the extracting of honey before it is properly ripened. The great injury that has been done to the honey market by placing upon it an inferior article is apparently recognized as it never was before. It used to be taken quite as a matter of course that a comb need not have more than about a third of its surface sealed when extracted. Nowadays it is pretty well agreed that it is better for the honey to remain on the hive for several weeks; and if it is all capped over, so much the better. The question, "What proportion of a comb should be sealed before it is extracted?" always sounded to me very much like asking, "How much poor honey can you add to good honey without spoiling it?" Why not leave the honey in the hive until it is ripe, and have it all good? Of course, under some circumstances unsealed honey may be ripe; but usually a part, at least, of the unsealed honey is very poor stuff; and the man who puts honey on the market containing much of this is not only foolish but often wickedly dishonest.

EXTRACTING HONEY FROM COLONIES WITH FOUL BROOD.

Elmer Todd, in the *Bee-keepers' Review*, claims that it is safe to extract honey that is above a queen-excluder over a colony that has foul brood. While it is doubtless true that a large proportion of the honey in a diseased hive is not infected, I do not think it would be safe to depend on any of it being incapable of conveying the disease. A great deal of the honey stored in the super has first been stored in the brood-combs, in many cases at least. Indeed, I believe Doolittle claims that most of it has been so stored. If this is the case, it will be seen that any honey in the hive is liable to be infected, no matter how clean the combs in which it is finally stored. I am sorry to see such things published, because most people are entirely too ready to take chances with foul brood, and I wish I could impress it on their minds that it does not pay. There are some methods of dealing with foul brood that work all right in the hands of the expert and careful, but which leave altogether too many chances of spreading the disease when attempted by the average bee-keeper.

THE SEASON UP TO DATE.

As I predicted in an earlier article, the grasshoppers have done a great deal of damage to the honey-producing plants of this lo-

cality, especially the sweet clover. In this they were helped by several varieties of worms. The result is that the prospect for a crop of honey is not at all good. Some of the largest producers in the valley have not had any surplus at all yet, and many of the bees are not in good condition to store much honey, even if there should be a change for the better. What sweet clover has not been too badly chewed up is now in full bloom, and for a few days the bees have been getting a little honey from it. The second crop of alfalfa is beginning to bloom, but does not seem to be yielding any honey yet. Reports from other parts of the State indicate as bad or a worse condition of things than here, so Colorado's honey crop is likely to be considerably below the average. This has been a great year for insect pests here; and a remarkable thing about it is the facility with which they adapt themselves to new conditions and adopt a new diet when occasion requires. One of the worst depredators on sweet clover appears to be the common cabbage-worm; and immense damage has been done to the potato-fields here by the well-known tomato-worm, the larva of the sphinx-moth.



SALT FOR FOUL BROOD.

It has been claimed at various times that salt is a preventive of foul brood, and that bees that had access to all the salt they wanted would never have the disease. I believe it was Betsinger, of New York, who used to be very insistent on this. Within a few days J. U. Harris expressed his belief that if salt and sulphur were placed about the apiary it would be effective in keeping off the disease. Now, in this part of the country the water contains a large proportion of salt—so much so that animals do not care for salt as they do elsewhere. When I came here I bought a cow and tried to give her salt, as I had been accustomed to in Illinois. She did not seem to care for it, but I thought she ought to have it and tried various ways to get her to partake of it, without success. When I mixed it with her feed she simply refused to eat, and I soon learned that I need not trouble myself to salt stock. Foul brood is rampant in parts of this valley; but directly through some of the worst-infected territory runs the "Big Salt Wash," a canyon on a small scale, cut through the deep alluvial soil by the flood waters from the hills and the waste water from irrigation. The character of the water that runs through it is sufficiently indicated by the name. If there were any thing in the theory that salt would prevent foul brood the bees here ought to be immune, but it does not work that way.



STRAINING HONEY.

When you buy an extractor you will probably get with it a small sack made of cheese-cloth that is called a strainer. The directions will be to hang this in the bung-hole of a barrel or to the gate of the extractor, and

run the honey as it comes from the extractor through this sack. I suppose this is a relic of the days when honey was extracted before much of it was sealed, because even in Illinois, with good honey, such a contrivance was not a success. In Colorado it would probably take about ten years to get a barrelful of honey through such an arrangement. My usual way of straining honey is to tie a large piece of cheese-cloth over the open top of a barrel, letting the cloth sag down so that the strainer will hold two or three gallons of honey at a time. Even with this arrangement, I have had difficulty in getting the cleome honey to run through this summer, and have had to warm it to get it to work satisfactorily. In doing this I have used with great satisfaction the method advocated by Mr. G. C. Greiner on page 597. A little oil-stove set under the extractor, which is on a bench very similar to that illustrated, proved a great help, even when the honey was allowed to run from the extractor all the time. It seemed better, though, to keep the honey gate closed and let the honey warm up more thoroughly before it was drawn off. The bottom of the extractor being somewhat enclosed by the sides, the heat is kept from spreading, and the little one-wick oil-stove was surprisingly effective in warming the honey without any danger of overheating it.



THE COLORADO STATE FAIR.

This will be held at Pueblo, Sept. 11 to 15. The writer will assist Frank Rauchfuss, the Manager of the Colorado Honey-producers' Association, in superintending the aparian department. Colorado bee-keepers are earnestly requested to unite in making this department one of the most interesting and instructive in the fair. The premiums offered are numerous and liberal, and should secure an exhibit that will be extensive, interesting, and of educational value. Begin now to prepare for it, and have something good to show. The following is a list of premiums to be awarded.

Goods properly labeled may be sent by express, charges prepaid, to the Secretary of the fair.

Entries close Monday, September 11.

All exhibits must be in place by 5 P. M., Monday, September 11.

The judges will award the premiums in this department Tuesday, September 12, at 9 A. M.

No article on exhibition can be removed until the close of the fair.

All honey and beeswax must be Colorado products. Several special prizes are offered in addition to this list.

	1st	2d	3d
Italian bees and queen in single-comb observatory hives.....	\$8 00	\$5 00	\$3 00
Carniolan bees and queen in single-comb observatory hives.....	8 00	5 00	3 00
Caucasian bees and queen in single-comb observatory hives.....	8 00	5 00	3 00
Largest and best display of bees of various races in observatory hives	10 00	6 00	4 00
Largest display of queens of various races in mailing-cages.....	5 00	3 00	2 00
Best case of white comb honey.....	3 00	2 00	1 00
Best case of light-amber comb honey.....	2 50	1 50	1 00
Best and largest display comb honey	10 00	6 00	4 00
Best display of special designs.....	3 00	2 00	1 00
Best dozen jars of white ext'd honey	2 50	1 50	1 00

Best dozen jars of light-amber extracted honey.....	2 00	1 50	50
Best and largest display of extracted honey.....	8 00	5 00	3 00
Best display of extracted honey in granulated form.....	3 00	2 00	1 00
Best 10 lbs. of yellow beeswax.....	2 00	1 00	50
Best and largest display of beeswax.....	5 00	3 00	2 00
Best display of special designs in beeswax.....	3 00	2 00	1 00
Best display honey-producing plants, mounted.....	3 00	2 00	1 00
Best display of fruits preserved in honey.....	3 00	2 00	1 00
Most instructive display of aparian products and of the various uses made of honey and beeswax.....	20 00	10 00	5 00
Frank Rauchfuss, Denver.....			
J. A. Green, Grand Junction.....			
Ass't Superintendent.			



OUR neighbor, Mr. Vernon Burt, of Mallet Creek, O., is such an adept in producing fancy and No. 1 honey that his customers come right to his own yard, paying his own price for it. They know his honey, and are willing to go after it, and they won't get it unless they do. What Mr. Burt has done, others may do. A word to the wise is sufficient.

BE sure you know your commission man before you ship a large amount of honey to him. Those who quote in our columns, we believe to be responsible and honest. Look out for the man who offers you a price above the general average. There is liable to be something wrong. While it is always better to make a cash sale, be sure you get the cash or its equivalent from a stranger before you let your own good honey get out of your hands.

DRONE BROOD FOR FISH-BAIT.

MR. A. J. HALTER, of Akron, O., visited us recently, and during the course of our conversation stated that he was supplying drone brood for fish-bait. Akron is surrounded by a belt of lakes, and angling is quite a sport there. Many of these knights of the rod have been coming to Mr. Halter for drone brood. They specify the age of it shall be just before hatching, when the young drones are white. A young white drone is removed from the cell and strung on the hook. Its color and shape at once suggest to the fish a big fat grub, and anglers say that fish will bite this bait as they will bite almost nothing else. It is especially adapted to all fish with large mouths like bass, blue-gills, and the like. As we are now in the midst of the outing season, bee-keepers and their friends can test this matter. It seems to me I have heard before that drone brood made the

very nicest kind of fish-bait, and I should be glad to hear from our subscribers who may know of its value for this purpose.

WHAT FRAME SHALL WE USE?

SOME little discussion has been started regarding the merits of the Hoffman frame. The columns of GLEANINGS are open to any fair article, either pro or con. But do not get the idea that there is any more money in making Hoffman frames than the old-fashioned Langstroth. The basis of profit is practically the same in all styles of frames. The manufacturers, I take it, are not wedded to any particular frame, but, of course, will sell and recommend whatever there is the most demand for. The A. I. Root Co., for example, catalog four distinct types of frames: Closed-end; partly closed-end (Hoffman); open-end thick-top; and, last of all, the old-style Langstroth with top-bar $\frac{1}{8}$ inch wide and $\frac{1}{8}$ thick. Although this last is altogether the cheapest, the demand for it with us is very light; yet some think this is the frame I should recommend to beginners. If I could feel that this were really the best frame I certainly would do so; but I honestly think it is the poorest by a long way. But that does not establish the fact that I am right, or the other fellow. We may both be right for our separate localities.

A COUPLE OF NOTED OHIO BEE-KEEPERS INTERVIEWED.

I HAVE just made an automobile tour of 175 miles, visiting a couple of noted bee-keepers in the northern part of our State. These were none other than H. R. Boardman, of East Townsend, and H. G. Quirin, of Parkertown. I believe the former to be the best-posted man on indoor wintering of perhaps any man in the United States. I interviewed him long and hard away up in the night, and a good part of the next day. This interview I hope to give to our readers some time in September, when the subject of wintering will be up for consideration.

As to Mr. Quirin, while he may not be the leading expert on queen-rearing, he is certainly one of them—at least one who makes money out of bees. And this leads me to say that the item on p. 763, may possibly leave the impression that he furnished the reporter with the exaggerated estimate as to his income as there given. He simply gave him the number of queens he reared, and his expected honey crop, and the reporter figured out the values and profits. Mr. Quirin frankly said he was not making any such money as the item stated. Well, I will give the real facts later.

THE AMOUNT OF HONEY ANNUALLY USED FOR MAKING BAKED FOODS.

I HAVE just learned that the National Biscuit Co. has recently purchased on one consignment *seventy carloads of honey*. Probably the great bulk of this was medium or

inferior, or off grades of extracted—perfectly good for manufacturing purposes, but unfit for table use. I understand that this is only one order. How many more carloads the company may be able to take care of I do not know. The probabilities are that, if it were not for the bakery trade, the medium and off grades of extracted would not sell at all. As a matter of fact, nearly all store cookies, jumbles, cakes, pastries, etc., that keep any length of time have to have some honey in them, and the honey must be absolutely pure. Honey, the bakers say, keep the cakes moist and nice; without it they dry up and are unsalable. Nearly all honey-cakes contain some other sweet than honey; but the baker must have the honey pure before he can use it. There is no substitute in the way of glucose or any other sweet than honey; and so long as this is a fact there will be a certain and steady demand for medium grades of extracted.

A BEAUTIFUL SOUVENIR OF A BEE.

ELSEWHERE in this issue we have made an attempt to reproduce a beautiful souvenir kindly sent us by Frank Benton from old Ireland. It is made of tissue paper, beautifully executed and colored; and as the postal card, for such it is, is opened, a most delightful surprise greets the recipient. A beautiful bee, almost lifelike, spreads its silken wings as if about to fly. The inside of the postal card is a reproduction of wild roses, with all the natural colors of the leaves and flowers preserved. Evidently this souvenir impressed Mr. Benton very favorably, and the reader is referred to page 820, where he will find Mr. Benton's letter announcing his find of "*Megapis zonata*." Knowing that Mr. Benton was somewhere in Europe I addressed a letter to the Department of Agriculture, Washington, and received a letter from Dr. E. F. Phillips, who has charge of the apicultural work during Mr. Benton's absence, stating that these souvenirs can now be obtained in Washington.

I suggest that you send and get one, and then, if you are a single man, mail it to your best girl, with a sweet little note inside. It will please her, I assure you.

I only regret that we can not reproduce the thing in colors as it is. I have decided to have mine framed, with Mr. Benton's autograph letter, to show to our bee-keeping friends when they come to visit us.

ONE CAUSE OF RUINOUS PRICES.

THERE is a conspicuous absence of reports from the clover belt, indicating what the honey-flow has been or will be. While, undoubtedly, the season has been poor, I suspect the lack of reports is not altogether that no honey has been secured, but because some producers fear that it would be an unwise policy to report a good flow, on the ground that it would depress the market. Probably the majority of our readers have neglected to write at all. A year ago such

reports as we did receive indicated a poor season. The *immediate* effect was a stiffening of prices; but when the carloads and carloads of honey that had been produced (but not reported) were dumped on the market *late* in the season it sent prices away down with a crash, and they stayed there. Better, far better, to have known the actual condition in the first place rather than to have had a demoralized market, as we did have after the holidays. No good comes from holding back facts and figures. If there has been a big crop, let the fact be known, and that right early. The effect of this information will be to induce large numbers to market early, when prices will be fair, and honey will move easily at fair prices. This will get rid of a large part of the honey in the early part of the fall, when it sells best. That which is held back, when finally unloaded will not hurt the market nearly as much as if it were *all* unloaded late with only a few early sales made. "Bulling" and "bearing" the market early in the season is liable to have a bad effect later on. To "bear" the market—that is, to depress prices by sending out false information to the effect that an enormous crop has been secured—has a tendency to hold back shipments; then when they *must* be unloaded there is liable to be a slaughter in prices. "Bulling" the market by not reporting crops secured is almost as disastrous, for there is bound to be a slump in prices when the *unexpected* honey is suddenly dumped on the market. An effort should be made to avoid flooding the market at a time when it can not stand it.

WHAT HAS THE HARVEST BEEN?

ALTHOUGH the reports have not come in as freely as I could desire, yet, taking all sources of information, including such reports as we have received, I am not far from the truth when I say the crop has been a light one, taking the United States as a whole, and an entire failure in many localities. The conditions in California and Texas are not materially different from those already reported. In the southeastern part of the United States, particularly in North Carolina, the season has been almost a failure. Apparently Michigan, Wisconsin, possibly Minnesota, Northern Illinois, and Ontario, Canada, will have a fair crop of honey. The prospects were dubious two or three weeks ago, when there was a change for the better. New York and Pennsylvania report all the way from a fair to a poor season. New England seems to be in the doubtful list yet. Colorado will be very much behind its general average; and this is particularly so for the western slope. One correspondent protests against the estimate made by J. U. Harris, in our issue for July 15, to the effect that 60 per cent of an average crop had been harvested. He thinks that not more than 5 per cent of a crop had been secured, and that the prospects are not good for more than 25 per cent of a crop.

Later.—Since the foregoing was written I have had a talk with our neighbor, Vernon Burt, who says his bees are still storing honey slowly from peavine and white clover. He thinks they will continue to do so, from the amount of forage in sight, till September. He further believes that his bees have been doing even better than they were two or three weeks ago. Those who are located in the clover belt, where there is still considerable white clover in bloom, as well as peavine and common red, will do well to look to their bees and see what they are doing. Do not give up yet. You may get a fair crop of honey. The recent rains, which appear to be general, came just as it was beginning to get a little dry. Queer season this.

COLORADO HONEY CROP ALMOST A TOTAL FAILURE.

Just as we are closing up the forms the following comes to hand:

Dear Sir:—To this date there has been no improvement in the honey situation worth mentioning. Have not heard of a single super being taken off the hives in all of Northern Colorado. It begins to look as if we would come nearer to having a total failure of the honey crop than any time before. F. RAUCHFUSS,

Mgr. Colorado Honey-producers' Association.
Denver, Colo., July 28.

I hope every one of our readers (whether they have sent one before or not) will send in a one-sentence report—not more than that—on a postal card as soon as this issue is received. Do not delay it one minute. This is very important to you as well as to your brethren in the craft

A COUPLE OF VISITORS AT THE HOME OF THE HONEY-BEES.

WE had a call from the Rev. Dr. D. E. Lyon, of Matawan, N. J., one who has lectured considerably on bees., and who has been and is now writing a series of articles for various magazines on the subject. He is an expert photographer, and the reader will probably find his communications with his photos in several of the leading magazines. One of his articles will appear soon in *Country Life in America*. He took a number of photos here, some of which will later be given in these columns.

We also had a call from Dr. E. F. Phillips, of the Department of Agriculture, Washington. He has charge, during the absence of Mr. Benton, of the Division of Apiculture. Dr. Phillips is peculiarly well fitted for his position, being a post-graduate university man, a trained entomologist, and last, but not least, a bee-keeper.

THE GREASY WASTE SMOKER FUEL AGAIN.

WE have received quite a number of letters of commendation for the suggestion made editorially on page 704, July 1, regarding the value of greasy waste, oily rags, and the like for smoker fuel. From reports it would seem that there is any quantity of this stuff thrown away that can be obtained by bee-keepers simply for the asking. Whether or not there are local machine-

shops and printing-offices where this fuel can be obtained, one can usually get all he requires by walking up the track a mile or two and gathering up the waste that is usually scattered along here and there. This will also be found more particularly near depots and other places where there are side-tracks. Where none of the materials spoken of can be obtained, one will usually be able to get some old gunny sacks by going to warehouses where grain is bought and phosphate sold.

The reports all agree that the waste or rags do not creosote the smoker; that the smoke is clean, lasting, and very effective; and, what is of considerable importance, is readily ignitable.

ANOTHER "HOLDUP," BUT THIS TIME BY A SWARM OF BEES.

We clip the following from the *Cleveland Press*:

A SWARM OF BEES PARALYZES DETROIT'S TROLLEY SYSTEM.

In Detroit, on July 7, a swarm of bees lit on a trolley wire at Michigan Av. and Griswold St., the heart of the city, at 4 o'clock Thursday afternoon, blocking the entire street-car service for a time.

A thousand people were attracted to the scene. A section of the swarm, loosened by a jar on the wire, fell off in a mass on the pavement, while the crowd stepped back with the greatest haste. Hundreds of the bees flew into the passing street-cars, while the passengers frantically fanned the air in fear, and it was not until a man who had seen bees "housed" before, arrived on the scene with a small wooden box on a long pole that the excitement subsided.

In a crowd of a thousand people I should suppose some "bee-man" might have volunteered in a very short time to take the bees out of the way. The fear of bees, like that of automobiles and a good many other things, is largely because the people do not understand the "critters." The more you know about any enemy, real or imaginary, the less there is to be feared.



Wonderful Honey-bee! thy tireless industry
Inspires my song,
Light as a summer breeze
You fit 'mid flowers and trees
The whole day long.

Warrior and architect, you build and you protect
With skill and care,
No forcing law or creed,
Yet for thy country's need
You do and dare.

None in thy humble home lives for himself alone
In human greed;
Ceaselessly to and fro,
E'er to supply ye go
The common need.

Why should not human kind, so helpless, weak,
and blind,
Learn this from thee—
That, in our common good,
When rightly understood,
Safest are we?
Paw Paw, Mich., May 19.



THE HOFFMAN FRAMES AND THE SIBBALD PLAN.

Some Corrections Concerning Them.

BY L. STAUCHELHAUSEN.

In GLEANINGS for June 15 I find my article on the subject of Hoffman frames, in the *Rural Bee-keeper*, mentioned twice. An editorial speaks of it as a very readable article, and Mr. Harry Lathrop criticises it. In both cases the Hoffman frame is compared with the unspaced loose hanging frame of twenty and more years ago. I think it is a rule of literary courtesy to read an article before criticising it; but this was not the case here, as I compared the Hoffman frame with another *fixed* frame, and not with this loose hanging frame, which, too, I consider as not satisfactory. The space between two of my frames is fixed by some device on the rabbet, and for this reason all that Mr. Lathrop says about these loose hanging frames may be true, but has no bearing on my article. My frames can't move and do not move in transportation from one apiary to another. For twenty-five years I have used such frames and hive-stories about 5 $\frac{1}{2}$ inches high for brood-chamber and super all alike, and for such shallow frames this kind of spacing is sufficient. It would be astonishing for every bee-keeper to see how easy such hives and frames can be manipulated. For deeper frames like the Langstroth a second spacing-device of some kind near the bottom-bar will probably be necessary.

I find a mistake on page 645 in an editorial on the subject of the Sibbald plan. You say, "Mr. Sibbald makes it emphatic that the new hive on the old stand must have one frame of brood and the queen." No, sir! He gives to this swarm one frame of brood with one or more *queen-cells*. The old queen remains in the parent colony; and the purpose of the whole manipulation is that this parent colony may be weakened so much that the queen-cells will be destroyed by the bees. This will be in four to six days. If this is the purpose the plan will work all right, especially if some more bees without the queen are brushed or shaken into or in front of the swarm, to weaken the parent colony still more. The plan is not new. It is described in a book written by G. Wurz, printed in Germany in 1889.

If the division is to be permanent and for increase I would not recommend the plan. In such a division the colony with the least brood should receive the old queen. Shaken swarms on the old or on a new stand are much better.

If you use a modification of the Sibbald plan, and give the queen with this one brood-comb to the swarm on the old stand, you have the same condition as with a shaken swarm, except that you have in the swarm fewer bees and no young ones, and you must hunt up the queen in the old colony. This takes considerable time and is not necessary with a shaken swarm. As with the Sibbald plan, you can reunite and prevent swarming in this way; but it is necessary to wait till one of the young queens has hatched in the parent colony, and has destroyed the other queen-cells. This will probably take a few more days than with the Sibbald plan.

Now a few words on the plan of dividing a colony temporarily, and reuniting when the queen-cells are destroyed. I have found that, for extracted honey, we have ways to prevent swarming which take less time and labor. For comb honey I prefer to use a large brood-chamber (three stories) before swarming-time to favor the development of the colony as much as possible. When the honey-flow commences I make a strong shaken swarm, hive it in a *contracted* brood-chamber (one story) on starters, and so force the bees into the sections. In this way I can get more honey in sections than if the brood-chamber or a part of it with now many empty cells be given back to this swarm in four or six days.

Converse, Texas, June 24.

[A frame-spacing rabbet has been advocated at various times; but so far as I know this arrangement has never been very popular, and I was not aware that so extensive a bee-keeper as Mr. Stauchelhausen was using it. As I said in my editorial in our June 15th issue, and say again, his opinion is well worth consideration.

I also accept the correction in regard to the Sibbald plan of non-swarming. I was expecting to go over the proof just before it went to press; but yard work started up with such a rush that I was obliged to go out into the field at that particular time, with the result that the error passed uncorrected.

Regarding the Sibbald plan of non-swarming, my experience this summer has not been altogether satisfactory, for the simple reason that the bees seem very much inclined to go back to the old entrance, no matter whether a new queen was in the new hive or whether there was very much brood or not. In order to make it work satisfactorily the entrance of the old hive should, I think, be some distance away; and in the case of one colony of hybrids, at least, I had to turn the entrance right about face, and in the course of an hour or so I discovered that the old field bees had found their old home. Then I carried it to another new portion of the yard, and here again the field bees found it. This may have been an extreme case, and that of the others mentioned unusual. I hope so.—ED.]

HIVE ENTRANCES.

Would it Not be Better to Have the Entrance Between the Brood-chamber and Super?

BY ADRIAN GETAZ.

Perhaps I might as well, for this time at least, simply give the facts and let the readers draw their own conclusions.

Some years ago a preacher in Amsterdam, Mr. Richards, took a notion to have a hive, though he lived in the midst of a large city. There was no place for the hive except in the attic of the house, and this was in such shape that, to give the bees an opening outside, it was necessary to have the entrance on the top of the hive, or, rather, the brood-nest. The following year he made arrangements to keep his bees in the country—moved his colony there, and bought another one. The entrance of the first one remained at the top—that is, between the brood-nest and the supers. During the three following years the colony with the entrance at the top gave large yields of honey (one year as much as five supers), and never swarmed, while the other never gave more than one super. All this was extracted honey.

The next item published was from Mr. Bourgeois, in Algeria, who stated that, with the entrance between supers and brood-nest, the yield is considerably greater and the swarming suppressed.

By that time the bee-papers of France, Belgium, and Germany took hold of the matter. A number of bee-keepers tried the plan, and all reported it a success. One estimated the amount of surplus obtained as five times greater than by the usual method, and in one case six times. The discussion brought out the fact that, in some portions of Eastern Europe, the straw hives used by the peasants are quite tall, and have the entrance (a big round hole) at the middle instead of at the bottom. The practice followed for perhaps centuries by the peasants of the Gatinais was also recalled. At the beginning of the honey-flow the Gatinais peasants turn the hives upside down. On the upturned hive (or, rather, straw skep, to use the English term) another is placed, leaving thus the entrance in the middle between the two. If the top one is already filled with combs, so much the better. If not, it is "baited" by fastening a small piece of comb at the top.

The surplus flow in the Gatinais is very heavy, but lasts only three or four weeks. The honey is decidedly superior, and is taken entirely by the Paris market at an advanced price.

Could we not do the same, or at least try it on a few colonies? A few conditions must be considered. The European apiarists work exclusively for extracted honey. But that does not always mean a full set of extracting-combs. Usually the apiarist distributes his combs among his colonies as far as they will go, and completes with foundation or even only starters. It is yet among them an

open question whether it is not better to melt every year a portion of the combs and let the bees build new ones. This is in view of the fact that the difference in price between wax and honey is considerably greater there than here.

Another feature may have a bearing on the question. All the frames used in Europe are deeper than ours, some only two or three inches deeper, others considerably more.

The last articles published on this question state that it is best to close the lower entrances. Some tried to leave both entrances open. That a considerable increase of surplus is obtained by that method is now an established fact. The application to section honey might offer some difficulty. It is necessary for satisfactory comb-building that the supers be warm and without air-drafts. I have just rigged up a few hives for the purpose; but the entrance, instead of opening directly outside, opens in a passageway which extends from there to the alighting-board, thus avoiding direct draft. I'll try, any way, and report.

Knoxville, Tenn.

[Friend G., placing the entrance higher up than the bottom-board is not new by any means; but the idea that a much larger amount of honey would be secured or has been secured is new. The first hive I ever used was King's American hive, that had two entrance-holes near the top, to be opened in warm weather. As the bees rather preferred this shorter cut it would seem that they might gather a little more honey because of the saving of time in unloading; and for any tall hive or tall frame I should think very likely this would be an advantage. The Langstroth hive, however, is so shallow, especially when there are no supers on, that little is gained in having the entrance higher up. During exceedingly warm weather I have often thought I secured more honey by giving the bees ventilation between the upper and lower stories—of course, leaving the lower entrance open: and as the bees soon begin to use this upper entrance for carrying in honey, it seems as if it might be some advantage. It hardly seems possible, however, that the increased yield is as much greater as you state it, and no one has yet found it out, because upper entrances are quite common in many apiaries, especially during the hot periods.—A. I. R.]

THE ONE-POUND SECTION A MISTAKE.

The Laxity of the Pure-food Laws.

BY G. BOHRER.

On page 596 Mr. Virgil Weaver states that there is no big demand for comb honey so long as it is put on the market in one-pound packages. Had he called them "*so-called*" one-pound packages he would have covered more ground; for the truth about

the matter is that, while the section is called a pound section, it seldom weighs a pound, often falling short three or four ounces; yet it sells in most cases at pound prices, not by weight but by the piece; and this fact has brought comb honey in this form into disrepute. I often hear people say they would buy more honey, but these sections do not weigh a pound; yet when we buy a section we pay the price of a pound for it. This being the case, I feel compelled to agree with Mr. Weaver, in part at least, when he says he thinks the section itself has done more damage to the comb-honey market than all other agencies combined, and calls up the comb-honey falsehood as having its origin in the section. I do know that, as often as I have been confronted with the artificial-comb story, the section has been pointed to as the chief support in favor of the falsehood. But the statutes of the country, both State and national, are also very largely at fault for the dull sale of honey; for in many of the States the law does not impose a penalty upon persons for labeling glucose "pure honey," and thus many thousands of pounds of that unwholesome product are sold annually under the name of honey, there can be no reasonable doubt. In view of this fact, let us yoke the two frauds up together, and then dismiss them from the bee-keeping profession. Glucose can be gotten rid of only by stringent legislation. The section can be called, when filled with honey, by its true name—that is, an expensive luxury, which it is, as it costs more labor and money to produce it than it does to produce comb honey in any other form, and extracting honey costs altogether less than comb honey in any form. Besides, it is much more wholesome as food than comb honey, for honey-comb is not at all digestible, but, on the contrary, is an irritant.

"But," says one, "comb honey in sections looks so much more beautiful and attractive than in the comb cut out of boxes or frames." This is not a fact except as we induce ourselves to think so. Chunk honey in shallow frames can be put on the market in almost as handsome shape as it is in the section; and if put up in buckets it need not, if properly handled, present an unsightly appearance; and it can be produced much cheaper than section honey, and custom will require it to be sold by weight, so that, when the consumer buys a pound, he pays for a pound only, instead of paying for a full pound when he gets only a part of a pound. If a few persons will persist in wanting section honey, call it "dude" honey, and in a brief period of time it will disappear from the market; and if it is *looks* they want, sell them a picture of section honey to hang on the wall of the dining-room, where they can look at it to their hearts' content.

The expense and cheat there is in section honey, and the glucose sold under the label of "pure honey," are the two great stumbling-blocks in the way of a much greater demand and sale for honey.

Lyons, Kan.

[Friend B., you are, in my opinion, taking a very extreme view of this matter. It was my privilege to give the one-pound section to the world. At first there was quite a hue and cry against it from some localities; but I think there are hundreds among our readers who will bear me out when I say that its advent gave the sale of honey a great impetus all over the land, and I might almost say all over the world. Thousands purchased honey because of the novelty and attractiveness of the new package. Besides, it was cleaner and neater than any thing before offered; in fact, it has boomed the sale of honey and the business of bee-keeping to such an extent all over the world that my opinion is it would be a pretty hard matter to get the public to go back to honey in boxes or even to larger sections. It is true, of course, that something different may attract the attention of the great honey-consuming public. This is true in almost every thing. When Captain Hetherington and Mr. Danzenbaker started the tall section in place of the square one there was quite a rush for it *because* it was something different. I suppose there are certain people, and always will be, who want chunk honey; and, of course, every enterprising bee-keeper will be ready to let them have it. By all means, give the people what they want; and once in a while give them something different by way of variety. But I think it will be a long while before chunk honey can be sold by the carload at the prices it now brings in one-pound sections. If the buyer and seller insist on calling a section a pound without weighing, they should be made to average at least a pound, and any thing else would be a fraud unless the grocer explains to his customers that it is so much a section without regard to weight. See p. 824.—A. I. R.]

MOVING BEES SHORT DISTANCES.

How it is Done.

BY O. R. BOSTOCK.

During the past two or three years GLEANINGS has contained a large number of articles on this subject, especially the last few months. In all these letters I have not seen one which mentions any of the principles I have found to work very well indeed, and I have moved several apiaries various distances, from a few yards to three miles.

It is well known that, if we move a hive of bees less than three miles, many of the bees, when out at work, will recognize old landmarks and return to the old location and be lost. Where the winters are severe, and the bees confined to their hives for several months at a time, they could, of course, be moved at the end of that time without loss, as they take bearings afresh on the return of warm weather; but here, where the bees can fly all the year round, these conditions do not exist.

I prefer to move during late spring or early summer, when the bees are at their busiest time, preparing to swarm. The first thing I do is to draw the hives close together into groups, each group consisting of from two to five hives, according as is most convenient and requires least handling. I prefer to place three in a group. This moving must not be done too rapidly. I start by moving each hive about one foot a day, of course moving stand and all complete. The two outsides are thus brought nearer to the center of the group. Sometimes the hives are very scattered; and it takes a long time to get them together. On each visit I move them a greater distance than I had done before, so that they will soon be going at the rate of four or five feet a day. If the distance is far I turn the hive round a little each time, so that the back is looking the way the hive is to go. I do all gradually and quietly, so as not to disturb the bees more than I can help.

After the bees get used to this moving, the distance can be rapidly increased per day. They get educated to following their hive up, and I have often shifted it as much as 25 feet at a time. When they see the front of the hive looking toward the place it was taken from, they follow it up much more readily. On reaching the center it should be turned round again, and all be looking the same way.

Having accomplished this, and got all the hives into groups, I next come along some day when the weather is bright and warm, and the bees flying—preferably in early afternoon. I select the weakest hive in each group, and give it a good smoking. This is done to prevent fighting, and make them treat strangers with civility. I then remove the rest of the hives that have composed that group, setting them down temporarily a few yards away so as to get all away quickly and not let any fighting start. The flying bees, finding only one hive left, all go into that one. On account of the smoking, the guards will not offer resistance, and there will be no fighting; but, all the same, I smoke them again after a few minutes to make sure. The removed hives are then taken right away to their new stands, and what was a weak colony will now become a powerful one; and if it does not pile in the honey, it ought to. If increase is desired, and all the hives are strong, I prepare a new hive, having one frame of brood and a queen-cell, and the rest as for a swarm. I then remove all the hives from the group, leaving only the empty one in their stead. This is a most excellent way to make increase.

The second process has now been accomplished, and we have the majority of the hives removed to their new locations; but there still remains one hive in each place where a group has stood. We now proceed again, as in the first case, and draw up the remaining hives into groups, and these groups will again be removed, with the exception of one hive. By this means the en-

tire apiary will soon be reduced to one group, and finally to a single hive. This hive should be left there for several days, so as to receive all the bees that may return, when it also will be removed.

By following this process we lose only the bees that return from the one hive instead of from, say, fifty hives, or every hive in the apiary. Instead of a loss, as is usually the case, the manipulation has resulted in a gain, either in honey, for it will have discouraged swarming, or else an increase in the number of stocks. If the last remaining hive is removed in the evening, and taken a distance of three miles or more, we have accomplished our object, and not a bee has been lost.

Fernhill, Napier, New Zealand, June 3.

MORE HONEY-PLANTS.

BY W. K. MORRISON.

Speaking broadly it may be asserted the leading trees of the world are valuable plants to the honey-bee. The great lumber trees of the tropics, teak, ebony, mahogany, logwood, rosewood, *lignum-vitæ*, green-heart, sandalwood, gutta-percha, and other trees of great value in the commercial world are also honey-furnishers as well as producers of very fine hard wood. What immense possibilities does this fact open up to future generations who will have to plant forests of these trees if a steady supply of lumber is wanted, and it is barely possible we shall ever find adequate substitutes for them!

In mentioning the foregoing trees I am fully aware a large number of great tropical trees are unmentioned, though of value to the bee-keeper. I have already referred to some of the principal tropical fruit-trees as nectar-yielders, in a former communication. But there are many yet unmentioned. What I wish to see is more attention on the part of foresters to the value of some trees as nectar-yielders. It would be quite possible to plant a forest in the tropics which would supply a steady yield of honey the whole year round, which would go a considerable way toward paying for the care of the trees.

There are also trees like the tamarind and *Inga dulcis* which yield a valuable product in addition to the wood and honey. The cinchona (quinine) tree is another of the same sort. Nor do the tropics monopolize all the good things in this line.

Among northern trees the persimmon occupies a similar place. Its wood is almost as close-grained as boxwood; its fruit is good, and, in addition, it is a nectar-yielder. Its fruit is probably best in a dried state, hence it offers great opportunities for culture on a large scale. The Japanese are the only people who can be said to have studied the persimmon seriously. In Europe it is known as the lotus (*Diospyrus lotus*), and may be the fruit of the ancient

lotus eaters, at least the botanists have so thought, hence its name.

The St. John's bread, locust, or carob bean, is "the really and truly" locust of all the ages; all others are frauds. It is supposed by many to be the original locust of St. John the Baptist, and I incline to that opinion. I believe it is the "husk" of the prodigal son, for the reason it was very common in the East in those days, and is still, and is a famous food for swine, though it is pretty good for humans as well, provided one gets the insides as well as the "husks." The translators of the Bible evidently thought so or they would not have said "locust," and all down through the ages this has been the popular opinion. That this is the real locust of the Bible is borne out by the fact that it is a good honey-yielder in a hot arid country, and it is said the Baptist was a honey-eater. The modern critics have pronounced against this idea lately, but I imagine these men are better acquainted with linguistics than they are with natural history. For the Southwest of the United States it will prove in time to be a valuable food for stock grown with a minimum of labor, and very nitrogenous. Any way, it may be earmarked as a bee-keeper's friend.

Boxwood is another friend of the bees, besides being the finest and best-grained of all woods. It is a slow grower; but as one tree is worth a small fortune it is worthy of serious attention on the part of tree-growers. It is true the honey is bitter to the taste, but likely this bitterness disappears if the honey is stored awhile.

Among all the hedge-plants I have ever seen I think the tropical lilac (*Duranta plumiere*) takes the first place. The bees go crazy over it, and it blooms quite awhile. After the bloom is gone it holds its berries till it is almost time for it to bloom again, so that it always looks well. Florida and California nurserymen sell it, so we may conclude it grows further north than the tropics. There is another handsome "lilac" (*Petræa volubalis*), which is a great tree for bees, but I doubt if it grows outside the tropics.

The *Vitex agnus castus* is another "lilac" which is better suited to the Southern States. It is a very popular garden tree in Europe. It is a bee-plant of considerable merit.

Ivy is not generally set down as a honey-yielder, but it is a real good one, and it blooms at a good time.

Corn is not generally set down as a yielder of the nectar sublime; but in tropical countries it is a very valuable honey-plant, showing the importance of locality, showing also that corn is a native of the tropics.

The century plant, despite its reputation, is one of the world's best honey-plants. It is a grand sight to a bee-keeper to see the eager way the bees work on the flower, perhaps 200 or 300 bees on one flower at a time. Contrary to its name, it blooms about as often as other plants. I should like to live in a locality which had plenty of it. As the

century plant grows on land that has usually no value for agricultural purposes this opens up a vista of possibilities. There is a great deal of land in the United States suitable for this plant, which could be bought for nothing per acre. There are also cacti which may likewise be utilized.

The arid-land bee-keeper has many plants to his liking, for there are quite a number of valuable bee-plants in Mexico, South Africa, and Australia which I do not know enough about to mention. For example, the eucalypti are all honey-yielders, more or less; but as there are over 200 of them I may be excused from saying anything about them. Possibly one of your Australian readers who has a practical experience of them can. Australian acacias are also interesting to a bee-master.

A GLIMPSE INTO THE BEE-YARD OF EUGENE SECOR.

BY EUGENE SECOR.

The photo which I sent you was taken recently to preserve the beauty of a mock orange (*Philadelphus grandiflorus*) in full bloom. This particular clump has been paying back in annual installments large dividends upon its original cost and slight care. A photograph without color can not do it justice. It is one of the finest sights I ever saw. The blossoms are very large, but not quite so fragrant as the old-fashioned syringa that used to fill the air with fragrance in the yard of the old homestead in York State, where I was born and raised. But we had nothing so fine as this. Such wonderful improvements have been made in floriculture in the last fifty years that one can imagine he lives in fairyland.

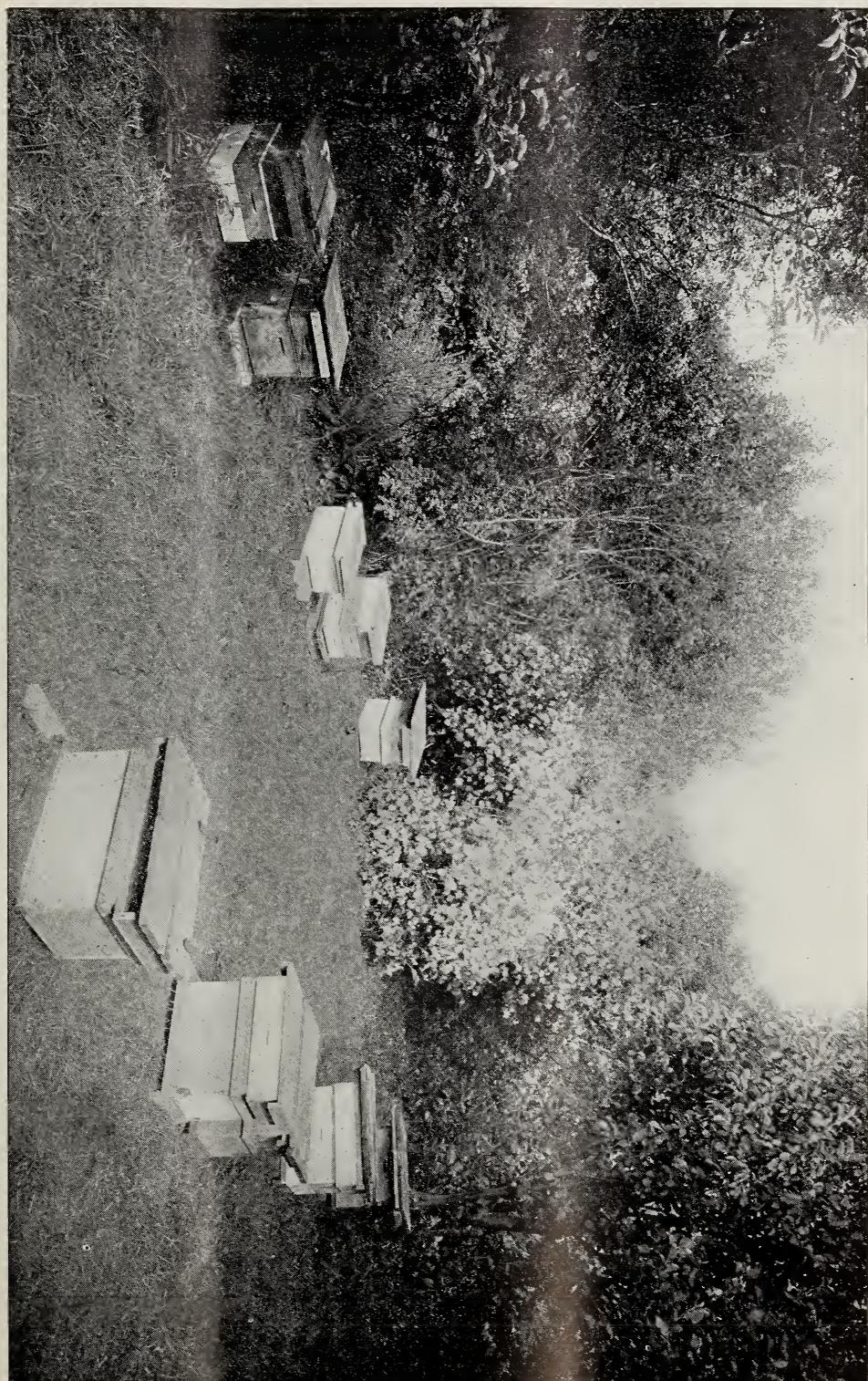
On the left of the mock orange stand two or three caraganas (pea-tree). They are beautiful shrubs, blooming about the first of June, and are now full of pods filled with real peas—not edible, however, so far as I know. The foliage resembles that of a locust. They are hardy, and would make a good hedge-plant, growing only about ten feet high, and not sprouting from the roots.

Back of the mock orange stands a clump of dwarf Juneberry now in ripening fruit—a desirable shrub for ornament, blossoming early and furnishing a good deal of bird-food. The fruit, although resembling the blueberry in size, shape, and flavor, is not very appetizing, being too dry and hard.

This is only one very small corner of my grounds, and incidentally shows a few colonies of bees.

Forest City, Ia., July 3.

[Our older readers will remember Mr. Secor as the poet-laureate of beedom, and the efficient General Manager of the National Bee-keepers' Association for many years. Business and other matters claimed his attention, and he finally refused to run again, although pressed to do so by his friends.—ED.]



A MOCK ORANGE IN BLOOM.—PHOTOGRAPHED BY EUGENE SECOR.

HANDY WHEELBARROW FOR BEE-YARDS.

Strong Testimony in Favor of the Hoffman Frame.

BY WARRINGTON SCOTT.

My wheelbarrow is built wide enough to hold two supers. The forward legs are constructed with springs, allowing them to slip over any obstacle they come in contact with. They are to prevent the wheelbarrow from upsetting, as I load on one side at a time and carry from two to four supers at a load, according to the weight of them. In putting on empty supers I carry six at a load.

The hive-tool shown is a scraper, used for scraping burr-combs from the under side of the honey-board or under cover, also cleaning any other part of the hive. I also have another tool which I use for prying supers apart and removing the follower from the hives.

I use the Hoffman frames. My follower is $\frac{3}{4}$ inch thick. There is a saw-cut nearly to the center, $\frac{1}{2}$ inch wide and $\frac{3}{8}$ deep. The above-mentioned tool has a hook at one end, used for catching in this saw-cut and lifting out the follower, which can be easily done after removing the wedge. I keep my frames wedged up tight at all times. I use staple spacers in the bottom ends of the follower.

I will add my testimony in favor of the Hoffman frame. I have used them for ten years, and prefer them to the ordinary frame, as they are easier to handle, and are always accurately spaced. I find far less burr-combs with this frame than with the ordinary frame, and they are always ready to be moved over any kind of roads fit to move bees on. In the fall of the year all that is needed is to screen the entrance, and the hive is ready. The cover telescopes down over the hive $\frac{1}{4}$ inch, and rests on a cleat which goes clear around the hive. This makes a very tight cover. There is an under cover next to the frames, leaving a dead-air space, making shade-boards unnecessary. The outside cover is covered with galvanized iron, supported by wood $\frac{3}{8}$ thick. The cleats, besides supporting the cover, make, in my estimation, the very best hand-hold that can be made. The above cover needs no weights to hold them in place. The stones shown in the photo were put on for another purpose. The outside cover is made $\frac{1}{2}$ inch larger than the hive. You will notice there are hand-holds in the cover, put in with a wabbling-saw. The cover being $\frac{1}{2}$ inch larger than the hive, it allows the cover to be removed with one hand. It can then be thrown on the ground upside down, and the super set on it while the hive is examined.

Wools, Ont., Can.



SCOTT'S BEE-HIVE WHEELBARROW AND APIARY.

HOW TO PROLONG YOUR LIFE.

Roat's Method of Fixing Cases, Lining, etc.

BY JAMES ROAT.

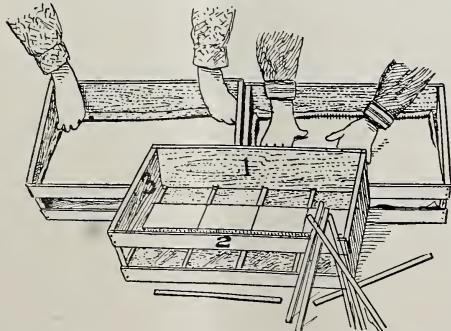
You will prick up your ears when you see the above heading, and I shall have interested readers as far as this, any way.

One of my professors used to say that any method by which you could save a minute would prolong your life by just that much. Now, in this article I propose to show some bee-keepers, at least, how to save, not minutes alone, but hours, and so prolong their uncertain existence.

During my 18 years' experience as a bee-keeper I have learned to do things faster and easier than I did at first, and in this article will try to show the A B C class how to make section-cases.

In the first place, unless you are a skilled mechanic and have a well-equipped planing-mill at your disposal, don't try to get out the stuff yourself. You will find it less vexatious, and in the long run cheaper, to buy of a dealer. Don't buy of the first man who comes along or because the price is lower than that of any one else, but go to the chap who has a reputation for selling *honest* goods at an *honest* price. Order early. Don't wait until you need the goods, but have them on hand. Make them up at odd spells, and then they are ready for the first of your honey crop and the early market. Having provided yourself with the materials, place a supply of each kind of boards and strips at the back of your work-bench. At your left (if you are right-handed) nail a shallow box 6 or 8 inches square, and put in a small handful of nails, scattered so that single nails may be easily picked up.

Next take a supply of pieces No. 1 and No. 2, and start the nails in the ends, where they will come in the finished case, allowing them to stick through about $\frac{1}{8}$ inch. Then, taking No. 3 in your right hand and No. 1 in



the left, you can stick them together so they will not slip while the nails are being driven.

The other end, front strips and bottom, are put on in the order named, the projecting nails holding the work in place until driven.

It used to take me about as long to put a paper tray into a case as it did to nail the case together; but this last season we hit

on a plan that I have never seen in print, so I will try to give it, with the aid of the illustration.

Place the first finger of each hand $1\frac{1}{4}$ inches diagonally from two adjacent corners of the paper, and push those corners right into the corners of the case. Then, holding the paper in place with the right hand, place the left with outspread fingers in the center, and with the now released right smooth the paper from the center outward into the corners.

It's just fun to put in trays this way, but it used to make me mad all over, "wrastlin'" with the "ornery" things. If you nail in your cleats, spread 40 to 50 flat on the bench, and start two nails in each. Do not drive them quite through. Then drop five of them into your case, and place on top of them a board with a heavy mark where each of the three central cleats should go. Place a cleat under each mark, and at either end, and a rap on each nail with the end of the hammer-handle completes the job. Now don't get mad and say you knew all that long ago. Remember that some one has to teach the primer class, and getting mad is *not* the way to prolong your life.

Canandaigua, N. Y., March 6.

TRANSFERRING-TOOLS.

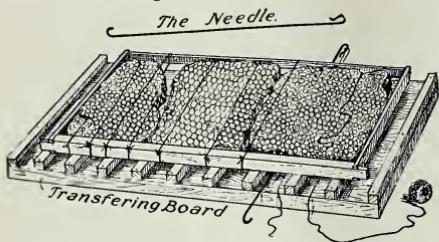
A Hook to be Used in Threading the String Around Pieces of Comb.

BY S. E. MILLER.

In this article I shall not attempt to go into the details of transferring, as the *modus operandi* is given in most of the textbooks for bee-keepers. It is also a fact that, in most cases, the so-called short (or Heddon) method is preferable; but there are times and circumstances when we wish to do the work at once, and have it done with; and in such cases it is necessary to resort to the old methods of cutting the combs out of the old hive or box, and fitting them into frames. Any one who has had experience along this line knows what a job it is, and it is for the purpose of aiding in this work that I have devised a couple of tools which I consider a great help, and will here describe and illustrate:

Take a board $\frac{1}{2}$ to $\frac{3}{8}$ thick, and somewhat larger than your frame. Nail across it from six to ten cleats as long as the board is broad, and about $\frac{1}{8}$ inch square. This I will call the transferring-board. The needle is made of about No. 11 or 12 smooth galvanized wire, and should be two to three inches longer than the depth of your frames. The eye of the needle is formed by bending one end around until it nearly touches, and then turning the extreme end slightly out from the main shaft or body of the needle. The other end is bent into a half-circle or ordinary hook. You will see that this gives us a self-threading needle with a hook where the point is on a common needle. The illustra-

tion will likely make it easier to understand than the description.



To use these tools, lay the board on something of a convenient height to work without bending your back too much. Have the cleated side up. Lay a frame on the board, and fit the combs into the frame. Now take the needle and a ball of common cotton twine, such as the merchants use in tying packages. Instead of threading the needle in the ordinary way, simply slip the eye of the needle over the twine. Now pass the needle between two of the cleats and under the comb and frame. Slip the needle off the thread and tie over or at one corner of the top-bar. Repeat this operation until the combs are securely tied in. Should any of the pieces of comb not reach clear down to the bottom-bar you can pass the twine through under, and then with the hook on the needle reach down between the bottom-

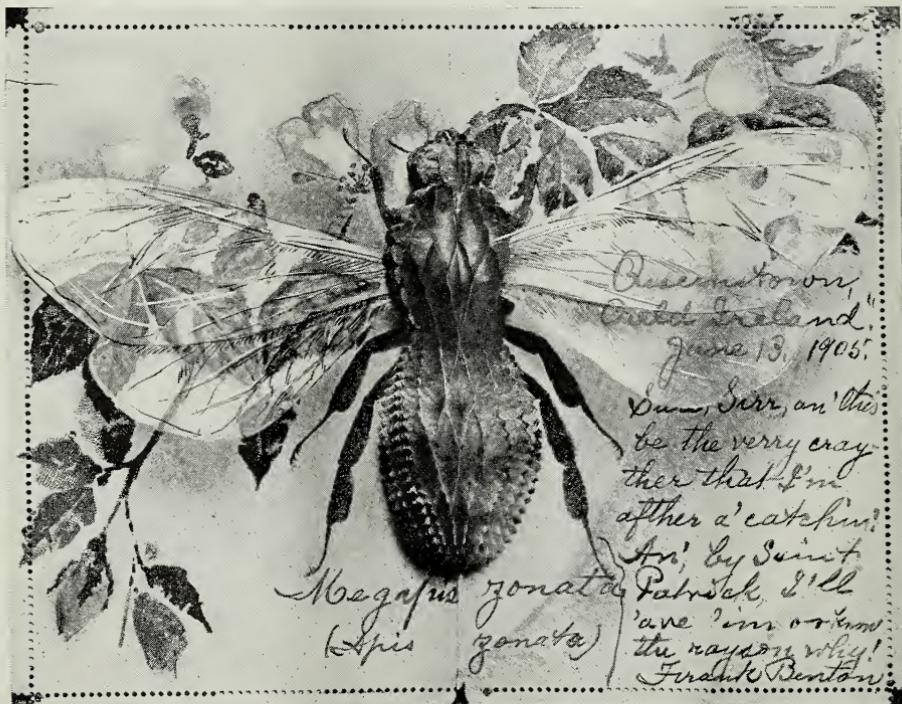
bar and the lower edge of comb and pick up the twine; draw the end up and tie over the top-bar. This will hold such pieces of comb in place until fastened by the bees. It is also well to pass one or two strands clear around the bottom-bar and all when fastening in any such pieces, so as to keep them from swinging out to one side.

The advantage of these devices is that, after the combs or pieces of comb are fitted into the frame, one need not handle either comb or frame until they are securely tied in. Then tilt up the transferring-board — frame, comb, and all — and the frame is ready to hang in the new hive.

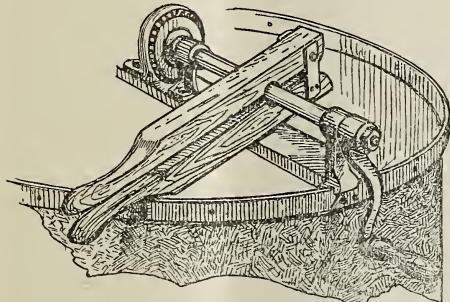
Now, I don't want the editor to say that it is much simpler and quicker to just wrap the twine around the frame and all several times. That plan would work all right if a fellow had about six hands to work with, so that he could use four hands to hold the various pieces of comb in place while he is wrapping the string around with the other two; but who has ever seen a man with six hands?

EXTRACTOR-BRAKE.

On page 487, May 1, you show an extractor-brake that costs only five cents. Here is one just about as cheap that is not open to the objection you make to the one devised by Mr. C. A. Butts, and referred to above, for it will not draw the crank-shaft out of line.



Take two pieces of hard wood, $1\frac{3}{4} \times \frac{7}{8}$, by 15 inches long. Four inches from one end cut out of the side of each piece about $\frac{1}{8}$ of a circle, corresponding to the size of the crank-shaft of your extractor. Fasten these together at the ends, having the notches cut out, with two pieces of heavy tin or ordinary tin doubled in the following manner: Lay the two pieces down with the notches opposite, and about $\frac{1}{8}$ inch apart. Lay one piece of tin over and one under, close to the end.



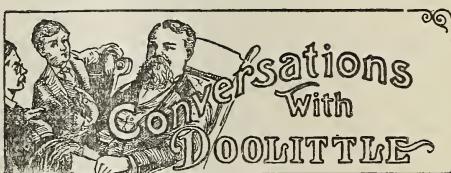
These pieces of tin should be about $1\frac{1}{2}$ by $3\frac{1}{2}$ inches. Drive two or three $1\frac{1}{4}$ -inch nails through one piece of wood and both pieces of tin. Through the other piece drive a single heavy nail, and clinch all. This forms a kind of hinge which permits of opening and closing the jaws of the brake. Round off the outer side of one of the arms or handles to make a convenient place to lay the hand on. Now slip this over the crank-shaft, allowing the two notches to engage the shaft, and the outer end of the lower arm to rest on the rim of the extractor-can. Speed up the machine; and when you want to stop, simply lay your left hand on the top arm or handle of the brake, and bear down. This brake will act, no matter which way the shaft is turning. It is open to only one objection, and that is, it operates on the crank-shaft instead of the shaft that carries the reel, and thereby creates a certain strain on the gearing. This strain, however, is not serious if the brake is not applied too severely — that is, thrown on too suddenly. Have one of the men in your shop make one of these brakes, and try it on an extractor. I think you will decide it is a simple, cheap, and useful device.

Bluffton, Mo.

[Your ideas are good, but I still think it would be best to wind the string round and round the frame, for, in my opinion at least, it rarely pays to transfer small pieces of brood — better save time by throwing away the corners or small pieces. But, even if it were desirable to use the small pieces, I do not see why the string need be cut and tied at every turn. Why not unwind enough for a frame, and then, with the needle, thread the string round and round the comb in the way which you described, but drawing up the slack each time so that the "stitches" will be kept tight? Of course, when the weather is not so warm as to make the

combs soft, no string at all is necessary if the cards of comb be cut so large as to fit the frame snugly.

After trying your brake for an extractor, I will say that it seems to be a complete success. For those who desire a brake on their two-frame extractors, I know of nothing better in the shape of a home-made device. It requires considerable pressure, however, owing to the comparatively small amount of friction surface; and it might be well, therefore, to make the upper stick a few inches longer than the lower one, so that the pressure may be applied by means of a foot treadle attached to it by means of a strap or rope. The hinge, as described, is hardly strong enough. I see no reason why the two pieces should ever be opened wide, and in my opinion, therefore, it would be better to nail the tin firmly to both pieces. Better still, use only one piece of tin, and nail it first on the top of the upper stick, carrying it down around the ends, and finally nail it on the bottom of the under stick. Or a quarter-inch hole might be bored through the two sticks, and a carriage-bolt used to hold the two ends together.—ED.]



GRADING HONEY.

"Say, Doolittle, I am a beginner at bee-keeping, having secured my first section honey this year, and I want you to tell me just how to grade it so I can get the best price for it in the markets."

"I am glad to know that you are anxious to secure the best price for your honey, through a proper grading of the same, and otherwise. If all were thus anxious, much of the honey that now finds market in such shape that only ruinous prices are obtained, to the damaging of prices for that which is put up in good style by the enterprising apiculturist, would not thus go upon the market, and the bee fraternity as a whole would be much better off."

"Thank you. But perhaps no credit should be given me, for it was only selfishness on my part that prompted the desire to put my honey up in the best shape possible, the reason being that I believed by so doing I could secure better returns to myself. I had not thought that such a course would help others in the bee business; but since you speak of the matter I am led to believe that even such selfishness as this might redound to the advantage of the whole."

"Certainly it would. But let us to your questions. What was it that you especially wished to know in this grading matter?"

"I want you to tell me just what to put

in for No. 1; what for No. 2, and what for No. 3, making all so plain that a beginner in apiculture need not fail to know how it is done."

"My plan of grading is to take a perfect section of white honey and set it up in a convenient place for a sample to work from, or to guide the eye, if you please; and all sections which come up to this one are classed as No. 1. But my usual way is to mark this grade of honey as XXX, as I like this better than the No. 1, as these X's are very easily placed in the hand-holes of the cases, so that, when a lot of cases are piled together with the ends toward you, or in any way so you can not see the 'face' side of the combs, they can be easily sorted."

"But you go too fast. What do you call XXX or No. 1 honey?"

"To be No. 1 the comb must be smoothly and evenly capped over throughout its entire surface, except, perhaps, a few cells bordering on the section, with little or no discoloration near the bottom of the section. The section itself must look new and clean, while no cells of bee-bread, or pollen, must be seen when looking through the honey toward the light."

"What! must it be as perfect as that?"

"That is the way I try to have it."

"Such honey would be 'fancy,' I should think."

"Yes, my XXX honey is always fancy."

"But you will not get very much such honey out of the whole year's crop, will you?"

"That depends very much upon the season. With a good season I have had fully three-fourths of my crop of white honey that would class XXX; while in poor seasons, when the nectar was secreted at intervals, and slowly at all times, if one-eighth of it classed as XXX it would do pretty well."

"I should have guessed that the one-eighth would have been the result, even in the best of seasons. But how about No. 2 honey?"

"A sample of this is set up to work from, the same as the No. 1, setting the same near the first, so that the eye can take in at a glance to which grade any sections belong that I may chance to pick up. This No. 2 I grade as XX, and it is to be the same as the XXX except that in it are put all sections with combs not too badly discolored near the bottom (so discolored by the bees traveling over them), together with sections which may have a few cells of pollen in them, the same being detected by holding the sections up to the light. And sections having a few unsealed cells of honey near the lower corners or other parts of their comb surface are also placed in this XX honey."

"That would be a grade of honey that would seem good enough for anybody; but I suppose it would not be profitable to put it in with the other?"

"No. The old way used to be to mix all the season's crop together, when crates were used holding 100 pounds or so; but with

our small shipping-crates of the present it is more profitable to have the grade in each as nearly uniform as possible."

"What about the next grade, or No. 3?"

"In No. 3 or X grade, as I use it, I put all sections having unsealed cells to the amount of one-eighth of the comb surface, those that by accident or brace-combs have a small part of their surface marred; all such as have pollen in them to any extent, and all that are badly soiled or discolored by the travel of the bees, or by the bees working in wax from the old combs below in capping them. If I have any sections in which brood has been reared, or that are one-third unsealed, or are otherwise unfit to go in grade X, they are set away by themselves till enough for a crate has accumulated, when they are crated as No. 4, and marked by me as 0."

"Then you would not send to market under any grade sections which were less than one-third unsealed?"

"As a rule, sections that are less than one-third unsealed had better be extracted, or the honey fed to the bees, and the combs kept over till the next year, to be used as bait sections to entice the bees to rapid work earlier than they otherwise would."

"But don't you have any difficulty by getting things mixed in this sorting matter?"

"No, not at all."

"Explain a little more fully. Probably my head is a little thick."

"Having my sample sections set up I take a tray which will hold the number of sections which one of my shipping-crates or cases will hold, when I commence to take the sections from the supers. If XXX honey predominates I set each section of that grade on the tray, setting all others in the apartments made for XX, X, and 0. When I have enough on the tray for a case of XXX honey, I take the tray to the bench, stand, or table where it is to be cleaned, scraped, or prepared for the shipping case or crate, when, as each section is scraped and cleaned, the same is set in the shipping-case where it belongs. When all are in, and the case ready for market, I go to fill the tray again, sorting as before. In this way I keep on until there have accumulated enough sections of either of the lower grades to fill a case, when these are put on the tray, and a case of that kind of honey gotten ready for market. Does this make it plain?"

"Yes, enough so that I am willing to risk a trial of the matter. If I get into trouble you will see me again."

"All right. Come as often as I can be of help to you."

I note your mention of Walter Harmer feeding his bees liquid feed in the cellar. I have been feeding a part of my bees for four months in the cellar with liquid feed prepared in the way he mentions, and those that I fed came out fine; but those that I did not feed came out very weak.

Carlton, Minn.

F. R. PALMER.



FOUL BROOD IN TRANSFERRED COLONIES;
THE WAY TO WINTER BEES.

I have one or two questions I should like to ask. I had a colony of bees in a box hive this spring, and I transferred them into one of your hives during fruit-bloom. I transferred enough comb to fill three frames and two frames of foundation—six frames in all. The larvae hatched out of the combs that I transferred, and the queen began to lay eggs in the cells that were drawn out from the foundation; and the young larvae, as they began to hatch, began dying, all the way from three days to the time they were capped over. Some died after being capped over. The combs looked ragged, the same as in the description in the A B C book, in regard to foul brood. The bees just about held their own. They had a very prolific queen that laid eggs in every empty cell, but did not gain any in strength. The larva, when dead, turned a dark cream color, and dried down to the lower cell-wall. Then the bees would remove it and the queen lay eggs to hatch and die. All bees seem to live after being hatched out once. Some dead larvae had the stringy ropy condition, and some did not—a slight smell in the hive at first when opened, but I could not detect any toward the last, but the bees did not improve. I could not see any thing wrong with the combs when I transferred them to the frames.

If I have asked the question clearly enough, what was wrong with them? I watched closely to see that it did not spread to my other bees, and have not found any in the rest yet.

Could the disease have been in that foundation, as it started there first? As it is near robbing time here I closed the hive up tight, all but a small opening at the entrance the size of my smoker snout. After dark I lit my smoker, got the fire well to going, and put in a tablespoonful of sulphur, stuck the snout of my smoker to the entrance, and in about two minutes all was over with them.

Give me the best plan to winter bees on their summer stands. If you use a cushion over the frames, would you leave an empty super on? This is a poor locality for bees, although this year is above the average here, I believe.

CHAS. W. RUSHER.

Hymera, Ind.

[It is not entirely clear from your description that you had foul brood. In transferring, one is very apt to chill the unsealed brood. If so, such brood will die, turn to a brown color, and look very much like foul

brood. The only clew that gives me fear that you have the disease is where you say the bees cleaned out the dead matter, that the queen laid eggs, and that the larvæ from these eggs also died. You should have treated the colony, as a matter of precaution, by the McEvoy plan. Killing the bees with sulphur, and then burning the combs, would be all right. But there is no need of killing the bees; for if they be shaken on frames of foundation in clean hives, the disease will not reappear.—ED.]

SPACING EXTRACTING-FRAMES.

J. A. Green, in one of his articles, says the bee-keeper who does not practice wide spacing of his extracting-frames has yet to learn one of the first principles of producing extracted honey. Then says, later, "Space nine frames in a ten-frame super." Is that as far as he ever followed the principle of wide spacing? Wide spacing accomplishes three purposes. It takes less time to work a super; you have fewer combs to uncapping and extract; and you have more wax, which means more profit.

Now I will make a statement. An apiary of ten-frame hives can be run with but seven combs to the super—seven frames to a ten-frame super, understand. Now, I do not mean to go and space every super to seven frames. The frames have to be spaced according to the strength of each individual colony, and also according to the honey-flow.

If the colony is weak the combs will have to be spaced close together, taking care to have them over the brood. If the colony becomes strong before extracting time, replace the combs wider; if none of the combs are being capped, insert uncapped combs between them. Do this at the time you go over the yard to do the swapping.

Now as to swapping, there are always strong and weak colonies in a yard. The stronger a colony is, the more work it is capable of doing. The extra-strong colonies are full some time before your yard as a whole is ready to be extracted, and your weak colonies have combs to spare. Take a wheelbarrow with a super of empty combs. As you go along lift the cover to each hive. When you come to one that is full, exchange some of the heaviest combs for the one on your wheelbarrow, reversing the process when you find a weak colony.

It takes but a very short time in this way to go over a yard of two or three hundred colonies; and by so doing you make your extracting as large as possible, and nothing is lost as would be the case if the strong colonies were not relieved.

I will further add that, to practice swapping, you must also practice wide spacing. When supers have their full number of frames you can not tell by a glance if the colony needs relieving, or exchange the frames as easily as where they are wide apart and comparatively loose.

Casanova, Cuba.

LESLIE BURR.

SELLING COMB HONEY IN FRAMES OR LARGER SECTIONS.

I see in GLEANINGS, pages 587 and 596, a plea for larger packages of comb honey. I produce comb honey by using extracting-supers and shallow extracting-frames with starters. These weigh from $3\frac{1}{2}$ to 5 lbs. when filled out, according to thickness of comb in a frame. This I sell at 15 cents a pound by the frame or frames. I weigh it before starting, and put the weight of each frame on the top-bar. Customers seem to appreciate that style of package, and I very seldom fail to make a sale to those who need honey, after I have held it up to the light to let them see the clearness.

I carry it to market in the supers by tacking a strip of wood half way down the ends of the supers with slots sawed out to hold eight frames to a ten-frame super. That keeps them from rubbing and breaking the cappings when some combs are thicker than others after grading. It also keeps them from sliding, which they would do after the first frame is taken out. All I see that is necessary to make a uniform comb is to have fences to hang between each frame to keep the bees from bulging them and making thicker combs on some frames than others. Doubtless supply manufacturers would make such a fence if there were a call for such. I should like to have some myself, but have not been able to find any in any of the catalogs.

Several bee-keepers have adopted that plan of marketing their honey since they have understood my plan of selling, and are getting a better price for their produce with less labor than formerly. L. L. GRASS.

Charlotte, N. C., June 17.

REPORT OF THE TOWNSEND PLAN; LARGE COMB-HONEY SECTIONS.

You ask for reports on the Townsend plan, page 598. I have been practicing this the past two seasons, with this difference: I do not extract, but sell these large frames which hold five or more pounds, as large sections. Honey generally sells here for 15 cts. per section, or two for 25 cts., customers knowing they do not hold a full pound, so they take this readily at $12\frac{1}{2}$ cts. per pound. I find it makes no difference if placed in the center or on the sides, bees invariably enter them first. I make these large sections myself, but think it would be a good idea for the Root Co. to place them on the market. They should be the same width as other sections, four-piece, and might be dovetailed or nailed. I use the fence between them, but no bottom slats.

Ashland, Ore.

W. W. ERB.

SELLING COMB HONEY IN SHALLOW FRAMES.

I want to tell you about my experience in selling comb honey in shallow frames. I use both shallow frames and sections on the same hive; get more honey, and have less swarming than I would if I should use sections only.

I sell honey about three or four hours three days in the week, and have sold in the past thirty days 1500 pounds in shallow frames direct to the consumer. I sell it a little cheaper than section honey, but have the advantage of getting each customer to take from three to four pounds at a time, when a great many would buy only one or two sections at a time; and I get most of the frames returned, and use them a second time.

I find that pieces of broken sections make splendid smoker fuel, and have the advantage of being right at hand, and ready to go into the smoker; and where a yard is run exclusively for comb honey the supply will be abundant.

J. M. CUTTS.

Montgomery, Ala.

[For an answer to this question of a larger comb-honey package, see p. 814.—ED.]

KEEPING HIVES COVERED WITH SNOW IN WINTER; A HANDY TOOL-BOX.

I have kept bees only a few years, commencing with one colony. We have had 96 lbs. of comb honey from one colony in one year. Last year we made all extracted honey. We have wintered so far on summer stands packed in chaff with a board leaned over the entrance. We have snow most of the winter here; and at the commencement of cold storms or severe weather we shovel snow over the hives and open the entrance again when the weather is milder. We keep the broad covers of the chaff cases on the hives all summer. This gives double roof with broad shade.

We have a box for tools, something on the plan of a horse-shoer's box, high enough to be convenient. This has a receptacle for bits of comb; also a place for the short stout chisel to pry and scrape with, and the curved-end (tack-puller) frame-lifter; also a thin long-bladed knife for cutting comb. There is a block with bit-holes (upright) to hold a small sharp knife for clipping queens' wings; a pencil for records; matches, etc. There is also a place for the smoker and brush, queen-cages, etc. Thus I have all the tools in easy reach, and easy to move from one hive to another.

For record this year we are using pieces of thin planed board placed between the two roofs of the hive. When we wish to open hives two or more stories high we place common slat potato-crates right side up on the ground—one for each super, placing the supers across the top of the slats.

Pratts, Mich.

O. W. CLARK.

THE ALEXANDER PLAN A SUCCESS.

I notice in your July 1st issue that one or two parties tried the Alexander plan and failed. Some time in the early part of May I divided four stands of bees per Alexander plan, and now have eight strong stands that are working in the supers. I am only an amateur in the bee business, but follow the Review and GLEANINGS pretty closely.

Denver, Col.

E. C. CHISHOLM.



OUT OF THE JAIL AND INTO THE PRAYER-MEETING.

O thou of little faith! wherefore didst thou doubt?
—MATT. 14:31.

If I am correct, there is at present a reform going on in the matter of enforcing law all over our land; and may God be praised for this reform; for the disregard of law has been getting to be one of our most serious dangers. The crowds that engage in lynching, and taking the law into their own hands, plead as an excuse that our laws are enforced with such half-heartedness, or not enforced at all, that, if the criminal is not punished by lynch law, he is not punished at all. Another thing, our good President has been trying hard to put down this matter of thieving in public places; and a string of great and good men throughout our land have been bringing about a great reform in the way of more carefully investigating and enforcing a strict observance of law. This wave of righteous indignation against all kinds of outlawry has been getting into even our small towns. Here in Medina the editor of one of our county papers came out recently with such a protest against illicit liquor-selling and other irregularities that our officers have been using the "drag-net," to use an expression we frequently hear of in the cities. As a consequence our county jail has had a new accession of inmates. A few weeks ago my sister said one Sunday afternoon:

"Amos, there are something like half a dozen people, mostly young men, at present in our jail. I know it has been some years since you visited the prisoners when we had any; but now as your health seems pretty good, and there is an unusual number confined there, don't you think it would be well for you to call around and see them?"

I do not remember what answer I made; but I had had the matter in mind for some time, and my conscience had been pricking me. I could easily answer my sister, who has been all her life prominent in W. C. T. U. work; but I felt at once that the answer must be given to God. The beloved Savior, years ago, bade me go out "into all the world and preach the gospel."

Perhaps I had better explain why I have of late dropped jail work. Our older readers will remember these Home papers once had considerable to do with the prisoners in our county jail. It is now nineteen years since saloons were banished from our village of Medina. After their banishment our jail was empty the greater part of the time. For a time I used to make inquiries every Sunday afternoon; but my health failed. I went to California, Florida, the Bermudas, and other places, and I somehow got out of

the habit of visiting the jail, even when I knew there were prisoners there. But the real and the greatest reason was that I had lost faith. When I first began prison work it was one of the happy surprises of my life when a young man who had already been to the penitentiary once, and was on the way there the second time for the same offense, was, through God's grace, brought out of jail and taken to the prayer-meeting. In my enthusiasm at the time I began to believe that, if Christian people—that is, those who had faith and tact for such work, would go into our jails in the *right spirit*, the prisoners and criminals of the whole wide world might be emancipated out of jail and taken to the prayer-meeting.

For a time God seemed to give me great victories; but when some of my converts went back after a little time, I lost heart. Another thing, when I found nothing but tramps in the jail I lost faith and courage. Satan apparently succeeded in convincing me that it was not worth while to waste time and breath on tramps. I do not know but I had gotten too exalted an idea of the value of that same "breath." I remember one of my last experiences in jail work. A tramp was kept there for some reason for several weeks. I tried to stir up some spark of manhood in him by way of remonstrance. Said I in substance:

"John, you admit you have been traveling all over our land begging your way, although you are big and stout, and able to work. You have been going to the farmers' homes, right in harvest time, and begging the kind women for bread and butter, not to speak of cake and pie. This is true, is it, John?"

He nodded his head, even if he did not say yes, and I went on.

"John, you have seen these poor hard-working women stop their work, leaving, perhaps, a crying or sick baby. You have accepted from their hands something to eat when you knew they were overworked, and, perhaps (with a large family of children), not having sufficient sleep. Some of these same women are wives of men who have mortgages on their farms, and *they* are overworked too, and in debt; and yet you, a big strong man, were willing to accept charity of these people while you refused to go to work and earn your living like other people. Have you no scruples of conscience and no *manhood* about you to make you feel ashamed to live in this way? You are big and strong, and yet your only excuse is that you do not like to work."

In spite of every thing I could do or say along this line, John said he did not care. It did not trouble *him* any, and he was not going to work hard for anybody if he could help it. I then told him if he preserved that attitude of heart and mind he ought to starve, and I got the sheriff to put him to work, and he made him work until he ran away to find some better place to ply his old trade.

Well, about that time I decided I was getting to be too old for jail work, and that it

was not worth while, anyhow. Satan (of course) helped me in my decision.

Now, dear reader, let me jump forward to the present month, July, 1905. We might as well begin with the 4th of the month. It will sound more patriotic, you know. After I got home I told Mrs. Root that God had called me to go to Nineveh, and, like Jonah of old, I did not want to go. She replied something like this:

"If God calls you, I think that, unlike Jonah, you *will* go. But how do you know he calls you?"

I related the circumstances, and told her that it would lie heavily on my conscience until I responded. Of course I could say "it is too hot weather for such work, and I am getting to be rather old;" that it was well enough for me in my prime, but nobody expects me to do such work now.

My friend, when you are talking to some friend of yours, or even to your wife, you can hunt up reasonable excuses for not doing certain things; but when God calls, and that all-seeing eye is over you and all around you, what folly to try to excuse yourself!

I knew from past experience (I am ashamed to confess it) that I should have but little peace or enjoyment until I responded to God's call. I went into the jail and found quite a good-sized class there, as I expected. As I had had years of experience in this work, it was not hard for me to read a part of a chapter, start a gospel hymn, and close with prayer. My talk I made personal so far as I could make it. I asked each one whose fault it was that they were in jail during this beautiful summer weather—whether it was the fault of our laws, the fault of somebody else, or their own personal fault. We had quite a friendly talk all around. But I did not feel very much faith I had accomplished any thing of any account until I was just about to leave. A boy in his teens beckoned me off to one side. He said he came from Pennsylvania. He was something of a bee-keeper and knew The A. I. Root Co., and something of my life personally. This he explained briefly, and said that he had just been brought to jail for stealing a ride on a freight train. His companion denied being on the train when they came to a stopping-place; but he replied that he was going to tell the truth, even if it got him into trouble; and he was in jail when, perhaps, by denying the offense as his companion did, it would have let him go free. He was under a sentence of 30 days and a fine of \$10. He said if I would advance the money for his fine he would work for me harder than he had ever worked for anybody else—in short, that he would do *any* thing in the world to get out of that place and go where he could get some honest work.

As I had heard many such promises during the years past, and some of them were not kept, I confess I did not have very much faith; but I made up my mind that, if the sheriff thought best, I would give him a chance to go to work. My sympathies were strongly enlisted; but I had learned by expe-

rience not to trust too fully to my sympathies or emotions. Our sheriff is a very good man—one who is not easily humbugged, but one who, at the same time, loves righteousness and hates iniquity. I was pained and surprised to learn from him that this boy's record was not very good. He said the boy had a very bad temper; that he did not hesitate to use bad language when provoked; furthermore, that he had grown up without schooling, and could hardly read or write his own name; and, finally, that he would be out very soon any way, and then I could give him a chance if I saw fit. As I had made no promise I let the matter drop. I expected to make another visit the following Sunday; but a thunderstorm hindered me at the usual hour, and I had an appointment Sunday evening out of town. To tell the truth, I rather forgot that I had promised Ransom (his name is Ransom Murray) that I would look into the matter; but some time during the week, about ten days after I first saw Ransom, a boy came up where I was at work, and seemed surprised that I did not remember him. With some reluctance he confessed he had just come out of jail, and I presume he felt a little hurt that I did not remember him nor my talk with him. He expressed a readiness to go to work at any thing I wanted done, and also added that he would try hard to be faithful.

Dear friends, I have been setting boys at work through much of my busy life. I have seen lots of them start out with good-natured enthusiasm; but I do not know that I ever saw a boy before who tried as hard to please as Ransom did. He was one of my "happy surprises," and yet when I talked with him there in the jail I had but little faith in him. I have quoted that beautiful little verse a good many times, right on these pages; but all at once it began to shine out with new and wonderful meaning. It was the Savior's inquiry to poor halting stumbling Peter when Peter started to walk—“O thou of little faith! wherefore didst thou doubt?”

Dear friends, the beloved Master would speak these words to us all along through life if we would but listen to them, and then go forward trusting him.

After Ransom had been at work three or four days, Mrs. Root wanted to know if he could not find a few raspberries down in the lot. The grandchildren said there were none worth picking; but she thought some older person might find enough for a pie. Ransom had already begun to make himself a favorite with the women-folks, as he was so ready to beat rugs or carpets, or do any sort of work about the house. He took a big tin pan and started for the berries. After he had been gone an hour or more I went down through the orchard but could not find him anywhere. I inquired of others who worked around there, but no one had seen him.

At this point Satan began to whisper, "There you are, old chap. Your new boy

has probably boarded a freight train and gone back to his old tricks. What did I tell you?"

I still insisted that Ransom was all right, although I could not find him anywhere among the berries nor explain where he had gone. I wonder if it may not do him a little good if I now confess how badly I felt at even the thought that he had broken his good record and gone away. After I had given him up (I am ashamed to say it) he came around with a heaping panful of berries. His face was covered with sweat, showing he had been hard at work. He had got down into a channel we have cut to let "Champion Brook" go straight through our land, and found berries where nobody else would take the trouble to go for them. He told Mrs. Root that was not all, and got a little painful besides, later on.

After I had become a little acquainted I began questioning him about the sheriff's report. He owned up that he got ugly in jail; but he said if I knew the provocation he had, he thought I would at least partly excuse him. He said his temper got up, and he did use bad language, as the sheriff said; and he explained his lack of education something like this:

"Mr. Root, my father and mother quarreled when I was only three years old, then they decided to separate and put their children out wherever anybody would take them. The man who took me evidently decided to make me pay my way. He gave me very little schooling, and that reluctantly. As a rule he would let me go to school one day and then keep me out two because the work was pressing. I never went regularly. The teacher and I, somehow, did not agree. Perhaps it was a good deal my fault, but I did not see it so then, and the teacher pronounced me no good. The man I worked for said if I was no good in school I was worth a little something on the farm. So I worked on the farm until I could not stand his treatment any longer. If I stayed till I was 21 he was to give me a certain sum of money. It seemed to me he wanted me to leave so he would not be obliged to pay this money. I got in with a show, and learned to swear. When I got all the 'show' business I could stand I ran away from it and tried to get to Fostoria, O., where an uncle of mine lives. My money gave out when I was within a hundred miles of Fostoria, and the boy who was with me said we could steal a ride on the freight, without harming anybody. Now you know it all. I can read enough so I saw your name on the building and the word 'Office' over the door. If you will just keep me at work I will do any thing in the world you want done, and I will try to learn to read."

A little later on, that same day, he asked me if there was not a Thursday-evening prayer-meeting somewhere. I told him there was; and without any invitation from me he expressed a desire to go. At the close of the prayer-meeting, as our subject was lack of faith, or half-heartedness in doing the

Lord's work, I briefly told Ransom's story, and asked those present to extend the right hand of fellowship to our young friend who was then present, and who, notwithstanding my lack of faith, was, in almost one short week, emancipated out of the jail and into a prayer-meeting.

As a matter of course, Ransom attends church, and is in my Sunday-school class. During the week I noticed he seemed to have something on his mind, and finally he spoke something like this:

"Mr. Root, you were kind enough to ask me into your class. Now, I am willing to do any thing in the world to turn over a new leaf, and be a different boy; but you know how it is about my reading. Do you think it would be any thing wrong if you were to pick me out a verse in the lesson and let me study on it between now and Sunday so I can read it reasonably well when my turn comes in the class? I do not believe in any sort of deception—that is, I don't now. I want to be fair and square; but you see I shall not only have to study a good deal, and practice reading that one verse, but you would have to manage it so the verse would come to me. If you think there would be any thing wrong in so doing, I would not think of it."

Now, friends, there is a problem for some of you older Christians—some of you who can not only read and write, but perhaps have been through college. How many are there who are as conscientious in regard to little matters of every-day life as my young friend Ransom was?

Of course, I do not *know* that this boy will hold out. This story that I am telling, that most of his shopmates will read, may make it harder for him, but I hope not. May the Holy Spirit guide him in his earnest and honest efforts to walk henceforth in the straight and narrow path that leads not only out of jail and into the prayer-meeting, but also leads out of *darkness of every kind* into the light that leads from earth to heaven. May God forgive me for my want of faith when he called me to take a part of my Sunday afternoon and go into our county jail and hold up the gospel of Christ Jesus to our erring brothers who have got into trouble. Perhaps more than one of them may have been as little at fault in reality as was our friend Ransom.

THE EQUITABLE, AND OTHER INSURANCE COMPANIES.

For some time past I have been feeling that I ought to help spread a warning in regard to insurance companies. The Chicago *Advance* has, however, put it in so much better shape than I could do that I take the liberty of quoting from that paper:

The country has been shocked at the wanton extravagance, boodling, and grafting methods of the Equitable Assurance Society. To use a phrase of the streets, the society had money to burn, and it burnt it. Officials were voted salaries twice as large as that of the President of the United States. Directors put their hands in up to the elbows. The great and supposedly good

Chauncey Depew was given \$20,000 a year just to smile. The Equitable was better than a gold-mine. It made Alaska look small to the men on the "ground floor."

But who furnished the money? The people. But why do the people pour their money in such a hopper? This we can not answer. All we can say is that a multitude of people are built that way. They dump money into certain classes of institutions until those in charge hardly know what to do with it. And it is not strange that the flood carries them into all manner of extravagances and vicious schemes. Hundreds and hundreds of millions have gone out of the pockets of the people into great aggregations of capital. It is bad for the country. The enormous aggregations of capital are used to set up combinations which are arrayed against the interests of the people.

We have heard much about a better distribution of capital. The people could do much toward this better distribution by keeping their money out of these big aggregations and using it in business over which they have some control. Some of it might even be used to pay overdue grocery bills, rents, etc.

But so long as the money is forthcoming there will be men to enrich themselves with enormous salaries and to indulge in unlimited luxuries.

There you have it, friends. And now I want to add that many good men deprive themselves of what is really their due, and perhaps burden themselves with debt, only to leave to their wives and children money that will do them harm instead of good. I know all that is to be said on the other side of the question; but there are extremes both ways; and the one of leaving money to your children that they did not earn for themselves as you did, I think is perhaps the worse of the two extremes. Every boy and girl nowadays, with average health, can earn all the money necessary to spend; and after it is earned they will know how to take care of it; and I think there are some widows to whom the same reasoning may apply. The only advantage it is, is in case you should die suddenly and unexpectedly. Of course, there are cases where an honest man will get his life insured in order to protect his good name in case of sudden death.

OUR GOD-FEARING GOVERNORS.

I suppose our friends outside of Ohio are aware that Mr. Pattison is the Democratic nominee for Governor, against Myron T. Herrick on the other side. Of course, the friends of Herrick, Cox, and other political bosses are doing their best to pick flaws in the character of Mr. Pattison; but it seems his past record is so good that they can not find any better way to kill him politically than showing he is "puritanical." Here is what the *American Issue* has to say about it:

The *Wine and Spirit News* of July 5 has for its leading editorial a bitter attack on Governor Hanley, of Indiana; Folk, of Missouri; and Hoch, of Kansas, for what it calls "butting into the private affairs of municipalities," by which it means keeping saloons closed on sabbath, according to State laws and according to their own oaths of office.

See the following from the *Wine and Spirit News* of July 5:

Do the people of Ohio want any thing like that? We hardly think so; and yet who knows what will happen, especially when the Anti-saloon League is able to induce the Democratic party to nominate its own candidate—a candidate whose first pronunciamento is a declaration that he stands for a Christian sabbath, which means a Peter Cartwright Methodist sabbath, with base ball tabooed, and all human joy perpetually stifled on the first day of the week. The people of Ohio should be allowed to decide for themselves how they wish to

spend Sunday. It is not for an orthodox class to determine it for them. If they want base ball, excursions, and places to amuse, and entertain and instruct themselves on the first day of the week, they should have what they want; and no governor, be his name Pattison or any other name, should be allowed to dictate to them on a matter so sacred.

One is almost tempted to pity the *Wine and Spirit News*, for the editor did not even seem to dream he had paid Pattison one of the highest compliments that could be given any candidate. Such statements will help elect him. Give the calf enough rope and he will hang himself may, perhaps, apply here.

We quote further from the *American Issue* as follows:

The people of Ohio now have the objection to this official liquor organ of the State to Mr. Pattison. He has defended the Christian sabbath in the legislature.

On the other hand, if the attack on Mr. Pattison means any thing, it means that Governor Herrick stands for what the Democratic nominee does not. Mr. Pattison stands for sabbath protection; Governor Herrick does not. Or why should Pattison be thus venomously assailed, and Governor Herrick continually spoken of in terms of support and praise by this liquor paper?

We ask the Christian voters of Ohio to study well the significance of this latest liquor utterance.

BOGUS COMB HONEY.

Our good friend Aunt Harriet, in the *Farm Journal* for July, corrects her mistake in regard to manufactured comb honey as follows:

Just one more reference to the statement about adulterated honey and artificial comb. As I neither eat nor buy honey, I based my opinion on newspaper reports, magazine articles, and the complaints of those who try to buy good honey. Wm. A. Selser's article, "The Honey-bee," in the May number, will enlighten the consumers; the producers know the truth; and to all who read my mistake, I offer my sincere apologies.

God speed the *Farm Journal*.



KILLING TWO BIRDS WITH ONE STONE.

They are big birds too, dear friends. I was going to call it a discovery, but it is not very new, and the two birds are not very new either; but I tell you they are important ones. I have talked to you over and over about the overtasked mothers—the mothers who are obliged to get up in the morning before anybody else, and get a good square meal for the lords of creation and a family of children besides. Yes, these mothers can have hired girls—some of them can; but there are many mothers who do not want any hired girl around to add to their cares and perplexities. It is these mothers I am trying to help; and as Mrs. Root is one of them you need not be surprised if I show considerable zeal in the matter; for Mrs. Root is still (in my opinion, mind you) one of God's jewels. Per-

haps I should not have put that sentence in marks of parenthesis; and if anybody objects to that parenthesis he can read as if it were not there. Well, now, I have by my "discovery" helped Mrs. Root a great deal, and brought smiles to her face that were worth a lot of sacrifice. And this is one of the birds I have killed.

The other bird was my old chronic trouble of indigestion. For years past my strength and energy gave out before dinner-time. If my dinner happens to be late—no, I do not scold, but Mrs. Root knows by my looks that I am suffering. Well, the stone that killed the two birds relieved Mrs. Root, and cured my "goneness" say half an hour before dinner-time or more. It came about in this way:

I told her, when the hot weather came on, she should stop cooking breakfast; and finally I declared I would not eat the breakfast, even if she did cook it. We had a package of what they call "Hardy food," a sample of which was left on our doorstep. It costs only ten cents a package, and it is sold at all groceries. Well, I got a good-sized bowl and filled it to the brim with these flakes of Hardy food, poured on some milk, and ate my breakfast. Then I watched and waited with much anxiety to see how my strength would hold out compared with the way it did with a good square meal—beefsteak, potatoes, hot cakes, maple syrup, and the usual bill of fare that we get at a hotel. Of course, we do not have a bill of fare at our home; but for years and years past we have thought it necessary to have some kind of meat, besides potatoes and other accessories. Well, I was interested in my work that day, and I thought I would keep on working until I played out. And here came one of my biggest and happiest surprises. *I did not play out at all.* When the whistle blew for dinner I was driving nails, and I felt as if I should prefer to keep right on driving, for I didn't feel faint nor hungry at all.

Now, somebody may say, "A. I. Root, the old chap himself, has been *hired* to puff a special breakfast food." Not much. After the package of Hardy food was gone I took the same ration in "Maple Flakes" instead of Hardy food. Then I tried Force and similar articles put up by the Battle Creek folks. They all answer the same purpose. I can not see any difference. Dry bread or zwieback is, perhaps, *about* the same; but I had used zwieback and milk so long I was a little tired of it. Now, do not be in a hurry to say, "That diet is all right for *you*, but might not answer as well for one in a hundred." That theory will not go down; for in talking the matter up I find that many people are enjoying better health on just such a light breakfast, especially in hot weather. You see this is almost in line with Huber's hobby of no breakfast at all; and it is also pretty nearly in line with the Cuban fashion of having no breakfast until ten or eleven. At present Mrs. Root is giving us a good square meal for dinner; but

my impression is the noonday meal could be cut down in variety a great deal, helping the women-folks by lessening their work and bettering the general health of individuals by not asking the digestive apparatus to handle a lot of different kinds of food.

I hope my good friends in Oberlin, the Root family I have been speaking of, will excuse me if I mention a little incident. At breakfast-time the whole good-sized family were served with oatmeal and milk, or some breakfast food something like oatmeal. I do not remember what it was, and it does not matter. As they gave me a pretty good ration I concluded that was, perhaps, all the breakfast they had. I was admiring their good sense; but when they began to take the plates away and to bring in some eggs on toast I laughingly made a protest, telling them that I had had all the breakfast that was good for me. Then Mr. and Mrs. Root exchanged glances and began to smile, and finally admitted they had got on to my discovery that a light vegetarian meal in the morning is better for students, professional men, or anybody else, and that the only reason why they had a little something extra that particular morning was because they had a visitor.

Now, I want to say right here that, when a visitor comes to your home, and can not put up with the regular every-day fare, he had better stay away. When I come to see you, please do not make any difference in your bill of fare on my account. Bro. Terry and some of my vegetarian friends will say that, if I would only get into the way of eating daily three such meals as I eat in the morning, or, better still, only two, it would be a greater improvement. This may be true, but I am not yet ready to subscribe to it.

Now, friends, this is an exceedingly important matter. By the way, Mrs. Root has objected all along to this, and felt worried because she was afraid I would run down on such a breakfast. But finally she said, "And just think of the years I have fussed to cook meat and other things every morning, when, as you now declare, there was no need of it, and that we all would have been *better off* without it!"

Now, friends, just try it in your own home; and for the sake of the dear wife, if for nothing else, try to be a little self-sacrificing; and if you come out in the end with better health, then you can rejoice with me.

Before closing I wish to beg pardon of the good friends who have been to the trouble of providing fresh meat when they knew I was coming, because of what they have read about the beefsteak diet. Indeed, a change of diet is often a great benefit; and very likely a change to a meat diet may be a great benefit in many cases; but my impression is, a simpler diet with less variety would do almost as well.

A few days ago I heard of an agent for some kind of theological work who went to the minister of the parish and informed him he would like to lodge and board in the

house for two weeks. Then he went on to say that he was under the doctor's care, and would have to have fresh lean meat at every meal; and the minister's wife, of course, put up with it uncomplainingly. Now, I think such chaps should be "fired" out of the front door promptly, even if they have D.D. or LL.D tacked to their names. May be you think I am irreverent; but I am sure a reform is needed, especially in this matter of invading a minister's home.

Wants and Exchange.

Notices will be inserted under this head at 15 cts. per line. Advertisements intended for this department should not exceed five lines, and you must say you want your advertisement in this department or we will not be responsible for errors. You can have the notice as many lines as you like, but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists, or notices offering articles for sale, will be charged our regular rates of 20 cts. per line, and they will be put in other departments. We can not be responsible for dissatisfaction arising from these "swaps."

WANTED.—To exchange bee-supplies (Root's) for beeswax. A. H. REEVES, Perch River, N. Y.

WANTED.—A hundred healthy worker brood-combs—Hoffman frame. State price. H. A. ROSS, Evansville, Ind.

WANTED.—To exchange 8-frame hives, extractor, and uncapping-can, for honey. Root's goods. O. H. HYATT, Shenandoah, Iowa.

WANTED.—To exchange a McCombs broom-stitcher, nearly new, for bee-supplies, cash, or any thing I can use. A. W. SWAN, CENTRALIA, Kansas.

WANTED.—To exchange fine untested Italian queens for bee-supplies or offers. See ad. this issue. S. F. TREGO, Swedona, Ill.

WANTED.—To exchange Barnes combination saw, almost good as new, for best alfalfa honey—comb or extracted. W. W. MCNEAL, Wheelersburg, O.

WANTED.—To buy colonies of bees. State price and condition. F. H. FARMER, 182 Friend St., Boston, Mass.

WANTED.—Refuse from the wax-extractor, or slum-gum. State quantity and price. OREL L. HERSHISER, 301 Huntington Ave., Buffalo, N. Y.

WANTED.—500 colonies bees to run on shares in Southwest Texas, that great honey country; personal attention. H. H. HYDE, 111 4th St., San Antonio, Texas.

WANTED.—50,000 lbs. beeswax from bee-keepers, to be worked into comb foundation. I need this amount to keep my machinery running. New quarters. Weed process. Fine goods. Satisfaction guaranteed. Foundation for sale, samples on request. H. F. HAGEN, 1632 Blake St., Denver, Col.

WANTED.—Honey in any quantity. State price, quantity, and quality. JUDSON HEARD, 110 South Forsyth St., Atlanta, Ga.

WANTED.—Refuse wax in exchange for cash, or stock in standard-bred White Wyandottes. H. E. CROWTHER, No. Kingsville, Ohio.

WANTED.—Every bee-keeper to act as subscription agent for the *Rural Bee-keeper* at the coming State and county fairs. Write for particulars. W. H. PUTNAM, River Falls, Wis.

WANTED.—To correspond with parties in New England States or elsewhere where there are prospects of a large crop of winter apples. Also a good typewriter for sale or exchange for honey. F. W. DEAN, New Milford, Pa.

Addresses Wanted.

WANTED.—The name and address of those anywhere in the U. S. who expect to buy honey in carload and less than carload lots during 1905.

St. Croix Valley Honey-producers' Association, Glenwood, Wis.

WANTED.—Parties interested in Cuba to learn the truth about it by subscribing for the Havana Post, the only English paper on the Island. Published at Havana. \$1.00 per month; \$10.00 per year. Daily except Monday.

Help Wanted.

WANTED.—A bee-keeper to take charge of two bee-branches on shares. A good proposition for right man.

LESLIE BURR, Casanova, Havana, Cuba.

Situations Wanted.

WANTED.—Young man wants situation with a bee-keeper. No liquor or tobacco habit. References. GEO. C. TRIMPE, 15 Bellevue St., W. Covington, Ky.

For Sale.

FOR SALE.—Leather-colored Italian queens, 50 cts. each. H. A. ROSS, Evansville, Ind.

FOR SALE.—White-clover comb and extracted honey; new crop. R. S. CHAPIN, Marion, Mich.

FOR SALE.—House apriary with 38 colonies. For particulars write MRS. KELLEY, Holloway, Mich.

FOR SALE.—Famous O. I. and Duro Jersey pigs of early spring farrow; also six handsome Scotch Collie puppies. JNO. M. WHEELER, Winchester, Ky.

FOR SALE.—Full colonies of leather-colored Italian bees at \$4.00 per colony. F. A. GRAY, Redwood Falls, Minn.

FOR SALE.—During July, 50 mismated queens at 30c, and 50 old tested queens at 50c.

B. F. AVERILL, Howardsville, Va.

FOR SALE.—Italian bees and queens. We make one, two, and three frame nuclei a specialty. Write for circular and price list. Also, 100 T supers for sale cheap. O. H. HYATT, Shenandoah, Page Co., Iowa.

FOR SALE.—The busy man's method of rearing the best queens; saves brood, time, and patience; rears queens under the swarming impulse. Can you afford to be without it? Price 25 cts. See ad. elsewhere. E. H. DEWEY, Great Barrington, Mass.

FOR SALE.—Italian and red-clover queens; untested, 60c each; \$6.00 per dozen. Safe arrival guaranteed. R. O. COX, Fort Deposit, Ala.

FOR SALE.—About 4000 lbs. fine extracted clover and basswood honey in 60-lb. cans. Sample and prices free. W. H. TOWNSEND, Hubbardston, Mich.

FOR SALE.—Second-hand 60-lb. cans. Guaranteed to please at 35 or 40 cts. per case of two cans each. A. G. WOODMAN, Grand Rapids, Mich.

FOR SALE.—One hundred colonies bees in one of the best North Michigan raspberry localities. They are in Hilton Hives, and o. k. Price \$3.50 per colony before Aug. 25. CLINTON F. PULSIFER, Nessen City, Mich.

FOR SALE.—Have 150 two-story eight-frame hives; many new, dovetailed, two coats oil paint, Italians and hybrids, in good condition, no foul brood, can be shipped. Make an offer pure on whole lot. Must be sold.

G. P. HOWELL, 6101 Dauphin St., New Orleans, La.